HEADQUARTERS
QUARTERMASTER RESEARCH & ENGINEERING COMMAND
U S ARMY

TECHNICAL REPORT

EP-150

ANTHROPOMETRY OF ARMY AVIATORS

QUARTERMASTER RESEARCH & ENGINEERING CENTER
ENVIRONMENTAL PROTECTION RESEARCH DIVISION

JUNE 1961

NATICK, MASSACHUSETTS

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Quartermaster Research & Engineering Center, Natick, Mass
ANTHROPOMETRY OF ARMY AVIATORS, by Robert M. White, 112 pp.
(Technical Report EP-150) June 1961

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2. Analysis
3. Aviation personnel
4. Data
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ANTHROPOMETRY OF ARMY AVIATORS

Robert M. White
Physical Anthropologist

Anthropology Branch

Project Reference:
7X95-01-001

June 1961

FOREWORD

There are few Army groups as specialized in clothing and equipment requirements or as rigidly selected by virtue of age, grade, and physical qualifications as Army aviators. This report is the first attempt to characterize the body dimensions of this group, and the data presented here should remain valid until a radical change in aircraft makes flying a universal skill, or until our present aviators are replaced by a new generation of Americans with significantly different dimensions. The reference portions of this report present detailed information on all of the measurements obtained to satisfy the expected requirements of the designers and logisticians for whom the report was constructed.

AUSTIN HENSCHEL, Ph.D.
Chief
Environmental Protection Research Division

APPROVED:

DALE H. SIELING, Ph.D.
Scientific Director
QM Research & Engineering Command

MERRILL L. TRIBE
Brig. Gen., USA
Commanding
QM Research & Engineering Command

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ABSTRACT

Information on the body size of Army aviators is available for the first time in the form of anthropometric measurements. The series of 500 flyers, including both warrant and commissioned officers, represents a sampling of about 10 percent of the Army aviator population. The anthropometric data, consisting of some 40 body measurements, have been analyzed, and are presented in the form of a table of percentile distributions and 82 bivariate charts. These data may now be applied in problems of design, sizing, and tariffing of flight clothing and specialized equipment for Army aviators, as well as in other areas of human engineering which require the use of body size information in aviator-equipment-aircraft systems.

ANTHROPOMETRY OF ARMY AVIATORS

1. Introduction

The Quartermaster Corps is expanding its research and development effort to meet the special clothing and equipment requirements of Army flying personnel. A serious shortcoming in this program was the lack of anthropometric data on Army aviators. Where such data were required in design or sizing problems, estimates had to be made using either body size information for the Army as a whole or data on Air Force flying personnel. This procedure was obviously unsatisfactory and, in order to fill this lack, an anthropometric survey of Army aviators was made.

2. Procedure

The Army aviator population consists of between 5000 and 6000 officers. It was planned, therefore, to obtain measurements on about 500 pilots, representing a 10 percent sampling taken at random. Three Army posts were selected, primarily because of the availability of large numbers of flyers at these sites; they were Fort Bragg, North Carolina, Fort Benning, Georgia, and Fort Rucker, Alabama.

After the necessary data sheets (Fig.1), instruments, and equipment were assembled, a team of one sergeant and 5 enlisted men from the Quartermaster Research and Engineering Field Evaluation Agency, Fort Lee, Virginia, was trained to take the anthropometric measurements. This 6-man group was later divided into 3 teams, each consisting of a measurer and a recorder who alternated their duties to relieve fatigue and boredom. Each team was responsible for a group of related measurements on the data sheet. The survey was carried out during the last two weeks in October 1959.

The subjects measured wore only undershorts and socks; the majority of the measurements, therefore, represent nude measurements. Forty anthropometric measurements, weight, and three skinfold thickness measurements were taken on each man in the series. Most of these were standard body measurements, (e.g., stature, sitting height, chest circumference) and conventional measurements of the head and face, hands and feet. A few less familiar measurements such as arm and leg reach were included for use in equipment design and human engineering problems. The 3 skinfold thickness measurements provide a basis for estimating the "percent of body fat" in each subject. Brief descriptions of the individual anthropometric measurements are given in Appendix B; further details and illustrations of the measurements may be found in reports listed in the References.

QMC ANTHROPOMETRIC SURVEY OF ARMY FLYING PERSONNEL

Date_____ Location_____ No. [1][2][3]

Name_____ Serial No._____

Organization_____ Rank_____ 4 [ ]

Birthplace (State, if born in U.S.; Country, if born abroad)_____ 5 [ ][ ] 6 Age 7 [ ][ ] 8

Aeronautical Designation:		9	Parachutist Designation:		10
Army Aviator	___	1	Parachutist	___	1
Senior Army Aviator	___	2	Senior Parachutist	___	2
Master Army Aviator	___	3	Master Parachutist	___	3

Qualification:		11	No. hours flight time:		
Fixed-wing aircraft	___	1	Fixed-wing aircraft ____	12	
Rotary-wing aircraft	___	2	Rotary-wing aircraft ____	13	
Multi-engine	___	3	No. years since rated ____	14	
Instrument, current	___	4	Combat flying (fixed or rotary wing):		
Instrument, non-current	___	5	Yes____ No____	15	

Anthropometric data, consisting of body measurements, are utilized by the Quartermaster Research and Engineering Command in the design and development of Army clothing and equipment. Anthropometric data on Army aviation personnel are required for use and application in the development and integration of aviator-equipment-aircraft systems. Your cooperation and assistance in the collection of these data is greatly appreciated by the Quartermaster Corps.

Figure 1-a Survey Data Sheet (front)

QMRE OT-Form 151
2 October 1959

No. ☐☐☐

ANTHROPOMETRIC MEASUREMENTS

Weight	☐☐☐	Sitting height	☐☐☐
Stature	☐☐☐	Eye height, sitting	☐☐☐
Waist Height	☐☐☐	Seat width, sitting	☐☐☐
Crotch height	☐☐☐	Shoulder-elbow length	☐☐☐
Kneecap height	☐☐☐	Forearm-hand length	☐☐☐
Shoulder breadth	☐☐☐	Buttock-knee length	☐☐☐
Chest depth	☐☐☐	Leg length, sitting	☐☐☐
Foot length	☐☐☐	Arm reach, forward	☐☐☐
Foot breadth	☐☐☐	Arm reach, upward	☐☐☐

Neck circum.	☐☐☐	Head height	☐☐☐
Shoulder circum.	☐☐☐	Tragion nasal-root length	☐☐☐
Chest circum.	☐☐☐	Tragion ant. chin. proj.	☐☐☐
Waist circum.	☐☐☐	Face length	☐☐☐
Seat circum.	☐☐☐	Head length	☐☐☐
Back waist length	☐☐☐	Head breadth	☐☐☐
Sleeve length	☐☐☐	Face breadth	☐☐☐
Ball foot circum.	☐☐☐	Head circum.	☐☐☐
Hand circum.	☐☐☐	Bi-trag.min. front arc	☐☐☐
Hand length	☐☐☐	Bi-trag. menton arc	☐☐☐
Hand breadth	☐☐☐	Bi-trag. coronal arc	☐☐☐
		Sagittal arc	☐☐☐

Chest skinfold	Arm skinfold	Side skinfold	Percent fat
☐☐	☐☐	☐☐	☐☐

Figure 1-b Survey Data Sheet (back)

3. Description of the sample

The aviators came from the following Army posts:

	No.	%
Fort Bragg, N.C.	118	23.6
Fort Benning, Ga.	149	29.8
Fort Rucker, Ala.	217	43.4
Fort Devens, Mass.	16	3.2

The 16 aviators at Fort Devens were measured in order to complete the series of 500. In the tables of demographic data (Tables III - XI), distribution is made according to Army post.

a. Distribution by grade (Tables II, III)*

The distinction between warrant and commissioned officers in Army aviation may be seen in Table II, which shows the distribution of the series by grade and aeronautical qualification. Thus all Army aviators in this series who were qualified in only fixed-wing aircraft were commissioned officers. Most aviators qualified in only rotary-wing aircraft were warrant officers (93.7 percent); only a few were commissioned officers (6.3 percent). The majority of aviators qualified in both fixed- and rotary-wing aircraft were commissioned officers (97.5 percent); only 5 pilots in this category were warrant officers (2.5 percent).

The distribution of the 500 Army aviators by grade is shown in Table III. The largest group (34 percent) were First Lieutenants, followed by Captains (31.2 percent) and Chief Warrant Officers, W-2 (19.0 percent). The total series consisted of about 28 percent warrant officers and 72 percent commissioned officers. The samples from Fort Bragg and Fort Benning included higher percentages of warrant officers and relatively fewer commissioned officers; on the other hand, the sample from Fort Rucker included fewer warrant officers and a higher proportion of commissioned officers.

b. Distribution by birthplace (Table IV)

The birthplaces of the pilots in the series were recorded by state, as an indication of the geographical background of the sample. For convenience, the states have been grouped into the geographic divisions used by the Bureau of the Census. The series is characterized by a high proportion of men (49 percent) born in the southern states, comprising the South Atlantic, East South Central, and West South Central census divisions.

*See tables, Appendix A

All of the states are represented in this series, with the exception of Alaska, Delaware, Hawaii, Nevada, and New Hampshire. Georgia, the birthplace of 34 men, led among the individual states, followed by North Carolina (31 men) and Texas (28 men). Next in order were Massachusetts (24), New York (23), and Pennsylvania (21).

c. Distribution by age (Table V)

Age was recorded as of the last birthday. The modal age group is the 28 - 29 year interval. The mean age of the series is 30.25 years, with a standard deviation of 4.58 years.

d. Aeronautical designation (Table VI)

In the total series, about 89 percent were designated as Army Aviators, and 11 percent were Senior Army Aviators. There was 1 Master Army Aviator in the series.

e. Parachutist designation (Table VII)

In this series 76 percent of the aviators were not qualified as Army Parachutists. About 15 percent were designated as Parachutists, 5 percent were Senior Parachutists and about 4 percent were Master Parachutists.

f. Aeronautical qualification (rating) (Table VIII)

Of this series 30 percent were qualified in fixed-wing aircraft only, 29 percent were qualified in rotary-wing aircraft only, and 41 percent were qualified in both fixed- and rotary-wing aircraft. About 12 percent of the pilots were qualified in multi-engine aircraft. About 55 percent held a current instrument rating, and about 6 percent had a non-current instrument rating. The first 3 categories add up to 100 percent, since all pilots were qualified in either fixed- or rotary-wing aircraft or both. However, totals for all of the categories would exceed the totals for the series, due to multiple qualifications.

g. Number of hours of flight time (Table IX)

As an indication of flying experience, the pilots in the series were requested to record the approximate number of hours of their flight time in fixed-wing or rotary-wing aircraft (or both). The hours of flight time in fixed-wing aircraft are shown in Table IXa; the hours of flight time in rotary-wing aircraft are shown in Table IXb. In both tables, the number of hours have been arbitrarily grouped into intervals of 300 hours. About 25 percent of the pilots in the series

had no time in fixed-wing aircraft, and 30 percent had no time in rotary-wing aircraft. The distribution of the hours of flight time indicate in general a greater accumulation of experience in fixed-wing aircraft than in rotary-wing aircraft by the aviators in this series.

h. Number of years since rated (Table X)

As a further measure of their experience, the pilots in the series recorded the number of years since they were rated as Army aviators. About 30 percent of the pilots in the series had been rated for less than 2 years. Approximately 58 percent of the pilots had been rated for between 2 and 7 years (since 1952-1957), while about 12 percent had been rated for 8 or more years (before 1951).

i. Combat flying (Table XI)

The pilots in the series were requested to indicate their participation in combat flying by a "yes" or "no" response. The type (fixed- or rotary-wing aircraft), conditions, duration, or location of the combat flying was not specified. About 12 percent of the series had participated in some combat flying, and about 88 percent had not.

4. Age, stature, and weight of Army aviators

In examining the data obtained on this series of Army aviators, age, stature, and weight received first consideration, since these are the standards of initial interest as well as those used in military selection. The means for these three are given in the following tabulation: for this study, for an Air Force series, and for an Army series.

	Age	Stature (in.)	Weight (lb)
This study	30.25	69.5	165.8
Air Force Series*	27.9	69.1	163.7
Army Series**	24.3	68.5	154.8

* 4,000 men (over 60% officers). See ref 3
**25,000 men. See ref 2

This Army aviator series, then, averages about 2 years older, about 1/2 inch taller, and 2 pounds heavier than a comparable Air Force series. As compared with the Army as a whole, this group of Army aviators averages 6 years older, 1 inch taller, and 11 pounds heavier.

The fact that the Army flyers were found to be older, taller, and heavier was not surprising. Since they are all officers, it was known that they would be older, and it was expected that they would be taller and heavier, but by how much was not known until the survey was actually carried out.

In a further consideration of the age, stature, and weight of Army aviators, various sub-samples in the series were examined and compared. These data are shown in Table I.

TABLE I: MEAN AND S.D. OF AGE, STATURE AND WEIGHT OF ARMY AVIATORS (according to grade, army post and geographic region)

Category	No.	Age (yr) Mean	Age (yr) S.D.	Stature(in.) Mean	Stature(in.) S.D.	Weight (lb) Mean	Weight (lb) S.D.
Grade							
Warrant Officers	141	30.32	3.95	69.31	2.31	164.04	19.27
Commissioned Off.	359	30.25	4.79	69.57	2.22	166.45	18.71
Army Post							
Fort Bragg	118	28.89	3.67	69.47	2.41	165.03	21.69
Fort Benning	149	29.57	4.53	69.46	2.30	165.26	18.87
Fort Rucker	217	31.61	4.73	69.50	2.17	166.39	17.40
Fort Devens	16	28.81	3.93	70.00	1.65	167.75	16.44
Geographic Region							
North East	94	29.70	4.88	69.04	2.18	164.87	19.40
North Central	114	30.25	4.18	69.67	2.21	166.15	17.82
South	242	30.36	4.57	69.59	2.25	166.31	19.21
West	40	31.52	4.88	69.51	2.40	163.48	18.58

Warrant officers and commissioned officers in this series were found to be of virtually the same mean age, but the commissioned officers averaged one-quarter of an inch taller and 2.4 pounds heavier than the warrant officers. In a breakdown by Army post the sample at Fort Rucker had a slightly higher mean age, which differed significantly from the mean ages of the other samples. The higher mean age at Fort Rucker was probably due to the higher proportion of older (and more senior) officers stationed at the Army Aviation School. The very small sample of aviators at Fort Devens showed the highest mean stature and weight. However, the differences in mean stature

and weight among the 4 Army posts were not statistically significant. While slight variations in mean age, stature, and weight were found among the samples representing geographic regions, none of these variations were statistically significant. Since, with the single exception of the age of the Fort Rucker sample, none of the differences in age, stature, and weight among the various samples in this series were found to be statistically significant, it was concluded that combining this group of Army aviators into a single series of 500 was justified.

5. Percentile distributions of anthropometric measurements (Table XII)

For purposes of clothing and equipment sizing, design guidance, and other human engineering applications, the presentation of anthropometric data in the form of percentile distributions is often the most useful and practical. Percentile values for the measurements taken on the 500 Army aviators in this series are shown in Table XII (Appendix C). The measurements are arranged alphabetically in this table, and the values are given in inches, with the exception of weight, which is given in pounds, and percent body fat, which is given in percentages.

In using the percentiles, it may be pointed out that, for a particular dimension, the measurement on 95 percent of the men will be below the value shown for the 95th percentile, while the measurement on the remaining 5 percent will be above that value. Similarly, 10 percent of the men will be smaller than the value shown for the 10th percentile in a given dimension, while 90 percent will be larger. The 50th percentile corresponds to the median, representing the midpoint of the range of a measurement in this series.

6. Use of bivariate charts of anthropometric measurements

The main method of presenting anthropometric data on Army aviators in this survey is in the form of bivariate charts, which are given in Appendix D. The bivariate charts are preceded by an index to facilitate reference to any particular measurement. For convenience, the 42 measurements are listed alphabetically in the index, rather than grouped by body region. The other measurements with which the first measurement is correlated are listed opposite each measurement in the index.

The bivariate chart is essentially the presentation of information on 2 body measurements or variables; these are recorded simultaneously and each is dependent upon the value of the other. For example, in the stature-chest circumference bivariate (see Appendix D), the values for stature are shown in intervals across the top of the chart and the values for chest circumference are shown in intervals at the left side of the chart. (Decimal values in inches are the result of conversion from the

metric system which was used in the original measuring.) Within the body of the chart are shown the numbers of men who, when measured, had the indicated values of stature and chest circumference. Thus, there were 15 men in the total series who were between 67.4 and 68.1 inches tall and who also measured between 37.8 and 38.5 inches in chest circumference. Since the total number of men in each bivariate chart is always 500, the frequencies shown in the chart may be easily converted into percentages by multiplying by 2 and locating the decimal point. (This is a short-cut method for dividing each frequency by the total of 500 to obtain the percentage.) Thus the 15 men mentioned above represent 3.0 percent of the total of 500 in the series. The bivariate chart then shows the following:

1. The range, from the smallest to the largest value, of two dimensions simultaneously, for these 500 Army aviators

2. The distribution of the 500 men according to their size in terms of the 2 measurements under consideration

3. The percentages for use in estimating size distributions and tariffs may be obtained by multiplying the numbers by 2 and locating the decimal point.

Below each bivariate chart are listed the means and standard deviations of the 2 dimensions shown in the chart. The mean represents the arithmetic average of the group; the standard deviation (S.D.) is a measure of the extent to which the individual values are scattered or deviate from the mean. In the case of stature, the mean for this series is 69.497 inches, and the standard deviation is 2.251 inches. Accordingly, about 68 percent of this series may be expected to occur between -1 and +1 standard deviation from the mean, or between 67.246 and 71.748 inches of stature. Further, a range of -2 and +2 standard deviations from the mean, or between 64.995 and 73.999 inches, may be expected to include over 95 percent of the series.

The r value, shown to the right of the means and standard deviations, is the coefficient of correlation, representing a measure of the degree of relationship between the 2 dimensions. The r value between stature and chest circumference is .233, indicating only a moderate positive correlation between these 2 dimensions in this series.

The 2 equations shown below the r value are regression equations, which permit the calculation of a predicted value for one dimension from a given value of the other dimension. For example, the average chest circumference (y) of Army aviators whose stature (x) is 70 inches may be calculated by solving the equation: $y = .213\ (70) + 22.914$, giving 37.824 inches. Or, by use of the other regression

equation ($x = .253\ y + 59.955$), it can be predicted that the average stature (x) of pilots whose chest circumference (y) is 40 inches should be 70.075 inches. These regression equations, of course, apply only to the data on this series of Army aviators.

7. Summary

An anthropometric survey of Army aviators has been carried out in order to provide body size information formerly unavailable on this segment of the military population. During this survey, a total of 500 qualified pilots, including both warrant and commissioned officers, were measured at 4 Army posts; this represents a 10 percent random sample of Army aviators. A total of 42 anthropometric measurements were made on each individual in the series.

The anthropometric data have been analyzed and are presented in the form of percentile distributions and as bivariate charts. These data may now be used in problems involving the design, sizing, and tariffing of flight clothing and specialized equipment for Army aviators. The data will also prove useful in other areas of human engineering which require body size information in the development and integration of aviator-equipment-aircraft systems.

8. References

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APPENDIX A

DEMOGRAPHIC TABLES OF STUDY SAMPLE

TABLE II: DISTRIBUTION BY GRADE AND AERONAUTICAL QUALIFICATION

Grade	Fixed-wing only		Rotary-wing only		Fixed and Rotary-wing		Total	
	No.	%	No.	%	No.	%	No.	%
Warrant Officer (W-1)	-	-	42	28.9	-	-	42	8.4
Chief Warrant Off.(W-2)	-	-	92	63.4	3	1.5	95	19.0
Chief Warrant Off.(W-3)	-	-	2	1.4	2	1.0	4	.8
2nd Lieutenant	11	7.3	1	.7	1	.5	13	2.6
1st Lieutenant	96	64.0	3	2.1	71	34.6	170	34.0
Captain	41	27.4	4	2.8	111	54.1	156	31.2
Major	2	1.3	1	.7	15	7.3	18	3.6
Lt. Colonel	-	-	-	-	2	1.0	2	.4
Total	150	100.0	145	100.0	205	100.0	500	100.0

TABLE III: DISTRIBUTION BY GRADE

Grade	Fort Bragg No.	Fort Bragg %	Fort Benning No.	Fort Benning %	Fort Rucker No.	Fort Rucker %	Fort Devens No.	Fort Devens %	Total No.	Total %
Warrant Officer (W-1)	17	14.4	20	13.4	4	1.8	1	6.25	42	8.4
Chief Warrant Off. (W-2)	29	24.6	34	22.8	30	13.8	2	12.5	95	19.0
Chief Warrant Off. (W-3)	-	-	2	1.3	2	.9	-	-	4	.8
2nd Lieutenant	7	5.9	3	2.0	1	.5	2	12.5	13	2.6
1st Lieutenant	45	38.1	49	32.9	70	32.3	6	37.5	170	34.0
Captain	18	15.3	36	24.2	97	44.7	5	31.25	156	31.2
Major	1	.85	5	3.4	12	5.5	-	-	18	3.6
Lt. Colonel	1	.85	-	-	1	.5	-	-	2	.4
Warrant Officers	46	39.0	56	37.5	36	16.6	3	18.7	141	28.2
Commissioned Officers	72	61.0	93	62.5	181	83.4	13	81.3	359	71.8
Total	118	100.0	149	100.0	217	100.0	16	100.0	500	100.0

TABLE IV: DISTRIBUTION OF BIRTHPLACE (BY CENSUS DIVISION)

Census Division	Fort Bragg		Fort Benning		Fort Rucker		Fort Devens		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
New England	10	8.8	12	8.1	19	8.8	2	12.5	43	8.7
Middle Atlantic	11	9.7	11	7.4	23	10.6	6	37.5	51	10.3
South Atlantic	30	26.5	44	29.7	39	18.0	4	25.0	117	23.7
East North Central	16	14.2	13	8.8	29	13.4	1	6.25	59	12.0
East South Central	10	8.8	19	12.8	24	11.0	1	6.25	54	10.9
West North Central	14	12.4	13	8.8	28	12.9	-	-	55	11.1
West South Central	15	13.3	22	14.9	33	15.2	1	6.25	71	14.4
Mountain	1	.9	10	6.8	12	5.5	-	-	23	4.7
Pacific	3	2.7	4	2.7	10	4.6	-	-	17	3.4
Foreign*	3	2.7	-	-	-	-	1	6.25	4	.8
Total	113	100.0	148	100.0	217	100.0	16	100.0	494	100.0
Not recorded	5		1						6	
Total	118		149		217		16		500	

* Includes men born in Panama, Canada, Italy, and Czechoslovakia.

TABLE V: DISTRIBUTION OF AGE

(Years)	Fort Bragg No.	Fort Bragg %	Fort Benning No.	Fort Benning %	Fort Rucker No.	Fort Rucker %	Fort Deven No.	Fort Deven %	Total No.	Total %
20 - 21	1	.85	-	-	-	-	-	-	1	.2
22 - 23	6	5.1	8	5.4	-	-	2	12.5	16	3.2
24 - 25	22	18.6	24	16.1	14	6.4	4	25.0	64	12.8
26 - 27	23	19.5	28	18.8	44	20.3	-	-	95	19.0
28 - 29	27	22.9	38	25.5	44	20.3	2	12.5	111	22.2
30 - 31	20	17.0	16	10.7	30	13.8	5	31.25	71	14.2
32 - 33	9	7.6	12	8.0	23	10.6	2	12.5	46	9.2
34 - 35	6	5.1	7	4.7	18	8.3	1	6.25	32	6.4
36 - 37	-	-	7	4.7	16	7.4	-	-	23	4.6
38 - 39	2	1.7	5	3.4	12	5.5	-	-	19	3.8
40 - 41	1	.85	2	1.3	13	6.0	-	-	16	3.2
42 - 43	1	.85	1	.7	2	.9	-	-	4	.8
44 - 45	-	-	-	-	1	.5	-	-	1	.2
46 - 47	-	-	1	.7	-	-	-	-	1	.2
Total	118	100.05	149	100.0	217	100.0	16	100.0	500	100.0
Mean(yrs):	28.83		29.56		31.60		28.75		30.25	
S.D.(yrs):	3.80		4.88		4.72		3.86		4.58	

TABLE VI: DISTRIBUTION OF AERONAUTICAL DESIGNATION

Aeronautical Designation	Fort Bragg		Fort Benning		F rt Rucker		Fort Devens		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Army Aviator	114	96.6	141	94.6	177	81.6	14	87.5	446	89.2
Senior Army Aviator	4	3.4	7	4.7	40	18.4	2	12.5	53	10.6
Master Army Aviator	-	-	1	.7	-	-	-	-	1	.2
Total	118	100.0	149	100.0	217	100.0	16	100.0	500	100.0

TABLE VII: DISTRIBUTION OF PARACHUTIST DESIGNATION

Parachutist Designation	Fort Bragg		Fort Benning		Fort Rucker		Fort Devens		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
None	80	67.8	115	77.2	175	80.6	11	68.8	381	76.2
Parachutist	20	17.0	18	12.1	33	15.2	3	18.8	74	14.8
Senior Parachutist	7	5.9	12	8.0	6	2.8	1	6.2	26	5.2
Master Parachutist	11	9.3	4	2.7	3	1.4	1	6.2	19	3.8
	118	100.0	149	100.0	217	100.0	16	100.0	500	100.0

TABLE VIII: DISTRIBUTION OF QUALIFICATION (RATING)

Qualification	Fort Bragg		Fort Benning		Fort Rucker		Fort Devens		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Fixed-wing only	32	27.1	48	32.2	63	29.0	7	43.8	150	30.0
Rotary-wing only	50	42.4	55	36.9	37	17.1	3	18.7	145	29.0
Fixed and rotary-wing	36	30.5	46	30.9	117	53.9	6	37.5	205	41.0
Multi-engine	6	5.1	18	12.1	34	15.7	1	6.2	59	11.8
Instrument(current)	56	47.5	81	54.4	134	61.8	5	31.2	276	55.2
Instrument (non-current)	2	1.7	2	1.3	18	8.3	6	37.5	28	5.6

TABLE IX: NUMBER OF HOURS OF FLIGHT TIME IN FIXED-WING OR ROTARY-WING AIRCRAFT

Number of Hours	Fort Bragg No.	Fort Bragg %	Fort Benning No.	Fort Benning %	Fort Rucker No.	Fort Rucker %	Fort Devens No.	Fort Devens %	Total No.	Total %
a. In fixed-wing aircraft										
None	49	41.5	51	34.2	25	11.5	3	18.3	128	25.6
1-299	11	9.3	14	9.4	6	2.8	2	12.5	33	6.6
300-599	24	20.3	29	19.5	32	14.7	7	43.8	92	18.4
600-899	12	10.2	23	15.5	30	13.8	1	6.2	66	13.2
900-1199	8	6.8	8	5.4	27	12.4	1	6.2	44	8.8
1200-1499	7	5.9	7	4.7	19	8.7	-	-	33	6.6
1500-1799	2	1.7	3	2.0	14	6.5	1	6.2	20	4.0
1800-2099	1	.85	2	1.3	16	7.4	1	6.2	20	4.0
2100-2399	-	-	4	2.7	8	3.7	-	-	12	2.4
2400-2699	2	1.7	3	2.0	10	4.6	-	-	15	3.0
2700-2999	1	.85	3	2.0	6	2.8	-	-	10	2.0
3000 or more	1	.85	2	1.3	24	11.1	-	-	27	5.4
Total	118	99.95	149	100.0	217	100.0	16	99.9	500	100.0
b. In rotary-wing aircraft										
None	32	27.1	49	32.9	62	28.6	7	43.8	150	30.0
1-299	26	22.0	29	19.4	60	27.6	2	12.5	117	23.4
300-599	20	17.0	32	[illegible]	23	10.2	3	18.8	88	17.6
600-899	23	19.5	20	[illegible]	21	9.7	1	6.2	65	13.0
900-1199	10	8.5	6	[illegible]	13	6.0	2	12.5	31	6.2
1200-1499	3	2.5	[illegible]	[illegible]	8	3.7	-	-	19	3.8
1500-1799	1	.85	3	2.0	6	2.8	1	6.2	11	2.2
1800-2099	1	.85	-	-	4	1.8	-	-	5	1.0
2100-2399	1	.85	1	.7	2	.9	-	-	4	.8
2400-2699	-	-	-	-	3	1.4	-	-	3	.6
2700-2999	-	-	1	.7	3	1.4	-	-	4	.8
3000 or more	1	.85	-	-	2	.9	-	-	3	.6
Total	118	100.0	149	100.0	217	100.0	16	100.0	500	100.0

TABLE X: NUMBER OF YEARS SINCE RATED

Number of Years	Fort Bragg No.	Fort Bragg %	Fort Benning No.	Fort Benning %	Fort Rucker No.	Fort Rucker %	Fort Devens No.	Fort Devens %	Total No.	Total %
Less than 2	58	49.2	61	40.9	25	11.5	8	50.0	152	30.4
2 - 3	37	31.4	44	29.5	73	33.6	4	25.0	158	31.6
4 - 5	15	12.7	26	17.5	55	25.4	2	12.5	98	19.6
6 - 7	4	3.4	10	6.7	19	8.8	-	-	33	6.6
8 - 9	-	-	-	-	10	4.6	2	12.5	12	2.4
10 - 11	1	.8	-	-	5	2.3	-	-	6	1.2
12 - 13	-	-	-	-	4	1.8	-	-	4	.8
14 - 15	2	1.7	1	.7	13	6.0	-	-	16	3.2
16 - 17	1	.8	7	4.7	10	4.6	-	-	18	3.6
18 - 19	-	-	-	-	2	.9	-	-	2	.4
20 or more	-	-	-	-	1	.5	-	-	1	.2
Total	118	100.0	149	100.0	217	100.0	16	100.0	500	100.0

TABLE XI: COMBAT FLYING

Response	Fort Bragg No.	Fort Bragg %	Fort Benning No.	Fort Benning %	Fort Rucker No.	Fort Rucker %	Fort Devens No.	Fort Devens %	Total No.	Total %
Yes	6	5.1	8	5.4	41	18.9	3	18.7	58	11.6
No	112	94.9	141	94.6	176	81.1	13	81.3	442	88.4
Total	118	100.0	149	100.0	217	100.0	16	100.0	500	100.0

APPENDIX B

BRIEF DESCRIPTIONS OF ANTHROPOMETRIC MEASUREMENTS

1. Arm Reach, Forward. The distance from the wall to the end of the middle finger, taken while the subject is sitting, with his shoulders against the wall and with his right arm and hand extended horizontally in front of him.

2. Arm Reach, Upward. The vertical distance from the seat surface to the end of the middle finger, taken while the subject is sitting, with his right arm and hand extended above his head.

3. Back Waist Length. The distance, along the surface of the back, from the largest bony bump (cervicale) at the base of the back of the neck to the point where the waist level crosses the spine.

4. Ball Foot Circumference. The distance around the right foot, with the tape passing over the inner and outer balls of the foot.

5. Bitragion-Coronal Arc. The distance over the top of the head from the notch (tragion) just forward of the upper edge of the right ear hole to the corresponding notch of the left ear.

6. Bitragion-Menton Arc. The distance over the chin from the notch (tragion) just forward of the upper edge of the right ear hole to the corresponding notch of the left ear.

7. Bitragion-Minimum Frontal Arc. The distance over the forehead above the eyebrows from the notch (tragion) just forward of the upper edge of the right ear hole to the corresponding notch of the left ear.

8. Buttock-Knee Length. The distance from the back of the right buttock to the front of the knee cap, taken with the subject seated.

9. Chest Circumference. The distance around the chest at nipple level, taken during normal breathing.

10. Chest Depth. The horizontal distance between the front and back of the chest at nipple level, taken during normal breathing.

11. Crotch Height (Inseam). The vertical distance from the floor to the lowest level of the crotch.

12. Eye Height, Sitting. The vertical distance from the seat surface to the inner corner of the eye, taken with the subject seated.

13. Face Breadth. The horizontal distance between the cheek bones (zygomatic arches).

14. Face Length. The vertical distance between the root of the nose and the chin.

15. Foot Breadth. The maximum width of the right foot.

16. Foot Length. The distance from the heel to the end of the longest toe of the right foot.

17. Forearm-Hand Length. The horizontal distance from the right elbow to the end of the middle finger of the right hand.

18. Hand Breadth. The maximum width of the right hand at the base of the fingers.

19. Hand Circumference. The distance around the right hand at the base of the fingers.

20. Hand Length. The distance from the wrist to the end of the middle finger of the right hand.

21. Head Breadth. The maximum breadth of the head.

22. Head Circumference. The maximum circumference of the head, measured above the brow ridges.

23. Head Height. The vertical distance from the notch (tragion) just forward of the upper edge of the right ear hole to the top of the head.

24. Head Length. The maximum length of the head.

25. Kneecap Height. The vertical distance from the floor to the top of the right kneecap, taken with the subject standing.

26. Leg Length, Sitting. The distance from the wall to the bottom of the foot, taken with the subject sitting against the wall and with the right leg extended.

27. Neck Circumference. The distance around the neck, taken just below the Adam's apple.

28. Percent Body Fat. An estimate of the amount of fat in the body, expressed as a percentage. The value is calculated by means of a formula from skinfold thicknesses measured at three sites: the chest, the back of the upper arm, and the side.

29. Sagittal Arc. The distance from the forehead to the lowest point at the back of the head.

30. Seat Circumference. The distance around the body at the level of the maximum protrusion of the buttocks, taken with the subject standing.

31. Seat Width, Sitting. The distance across the widest portion of the hips, taken with the subject sitting.

32. Shoulder Breadth. The distance across the shoulders (bideltoid), taken between the greatest lateral protrusions of the muscles of the upper arm.

33. Shoulder Circumference. The distance around the shoulders at the level of the greatest lateral protrusion of the muscles of the upper arms.

34. Shoulder-Elbow Length. The vertical distance from the lateral tip of the right shoulder bone to the bottom of the elbow.

35. Sitting Height. The vertical distance from the seat surface to the top of the head, taken with the subject sitting.

36. Sleeve Length. The distance from the middle of the back (spine) around the right elbow to the wrist bone, taken with the elbow held at a right angle.

37. Stature. The vertical distance from the floor to the top of the head.

38. Tragion-Anterior Chin Projection. The straight-line distance from the notch (tragion) just forward of the upper edge of the right ear hole to the front of the chin.

39. Tragion-Nasal Root Length. The straight-line distance from the notch (tragion) just forward of the upper edge of the right ear hole to the root of the nose.

40. Waist Circumference. The distance around the body at the waist level, with the abdomen relaxed.

41. Waist Height (Outseam). The vertical distance from the floor to the upper edge of the hip bone at the waist.

42. Weight. Weight to the nearest pound, taken on spring scales, with the subject wearing only undershorts and socks.

APPENDIX C

TABLE XII: PERCENTILE VALUES OF ANTHROPOMETRIC MEASUREMENTS*
(in inches, except Nos. 28 and 42)

Measurement*	Percentiles								
	1st	5th	10th	25th	50th	75th	90th	95th	99th
1. Arm Reach, Forward	32.3	33.5	34.1	35.1	36.0	36.9	38.0	38.5	39.6
2. Arm Reach, Upward	49.6	50.5	51.3	52.7	54.1	55.4	56.7	57.4	58.8
3. Back Waist Length	14.7	16.1	16.7	17.4	18.2	19.0	19.6	20.0	20.9
4. Ball Foot Circumference	8.5	8.8	9.0	9.4	9.8	10.2	10.7	10.8	11.3
5. Bitragion-Coronal Arc	12.8	13.1	13.3	13.6	13.9	14.2	14.5	14.7	14.9
6. Bitragion-Menton Arc	11.6	11.9	12.1	12.4	12.7	13.0	13.3	13.4	13.8
7. Bitragion-Minimum Frontal Arc	11.1	11.4	11.5	11.7	12.0	12.3	12.5	12.7	13.2
8. Buttock-Knee Length	21.4	22.1	22.4	23.1	23.8	24.5	25.2	25.8	26.7
9. Chest Circumference	33.3	34.3	34.9	36.2	37.7	39.2	40.5	41.2	42.6
10. Chest Depth	7.4	7.9	8.0	8.4	8.9	9.4	10.1	10.4	11.0
11. Crotch Height (Inseam)	27.8	28.9	29.6	30.6	31.6	32.8	33.8	34.6	35.9
12. Eye Height, Sitting	28.1	28.8	29.3	30.0	30.9	31.8	32.6	33.1	34.5
13. Face Breadth	5.1	5.2	5.3	5.4	5.6	5.7	5.8	5.9	6.0
14. Face Length	4.1	4.3	4.4	4.5	4.7	4.8	5.0	5.1	5.2
15. Foot Breadth	3.5	3.6	3.7	3.8	4.0	4.1	4.3	4.4	4.5
16. Foot Length	9.5	9.9	10.1	10.3	10.6	11.0	11.3	11.5	11.9
17. Forearm-Hand Length	16.1	17.6	18.1	18.5	19.1	19.6	20.2	20.4	21.5
18. Hand Breadth	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9
19. Hand Circumference	7.5	7.8	7.9	8.2	8.4	8.7	9.0	9.1	9.3
20. Hand Length	6.7	6.9	7.0	7.2	7.5	7.7	7.9	8.1	8.3
21. Head Breadth	5.6	5.7	5.8	6.0	6.1	6.3	6.4	6.5	6.7

*See Appendix B for description of measurements

TABLE XII: (Continued)

	Measurement	Percentiles 1st	5th	10th	25th	50th	75th	90th	95th	99th
22.	Head Circumference	21.4	21.6	21.8	22.1	22.5	22.8	23.2	23.4	23.8
23.	Head Height	4.4	4.6	4.7	4.8	5.0	5.2	5.3	5.4	5.6
24.	Head Length	7.2	7.3	7.4	7.6	7.8	8.0	8.1	8.2	8.5
25.	Kneecap Height	17.8	18.9	19.4	20.1	20.9	21.6	22.4	22.8	23.5
26.	Leg Length, Sitting	40.8	42.1	42.8	43.8	44.9	46.1	47.1	47.6	48.3
27.	Neck Circumference	13.4	13.8	14.1	14.6	15.1	15.6	16.1	16.3	16.9
28.	Percent Body Fat (in percentages)	7.0	7.9	8.5	10.2	13.4	16.1	18.0	19.3	21.9
29.	Sagittal Arc	12.5	12.9	13.1	13.4	13.8	14.1	14.4	14.6	15.0
30.	Seat Circumference	33.3	34.9	35.6	36.9	38.2	39.5	40.7	41.5	43.8
31.	Seat Width, Sitting	12.4	12.8	13.1	13.5	14.2	14.8	15.4	15.7	16.3
32.	Shoulder Breadth	16.4	16.8	17.2	17.6	18.2	18.8	19.5	20.0	20.5
33.	Shoulder Circumference	39.9	41.8	42.7	43.8	45.3	47.0	48.4	49.0	50.9
34.	Shoulder-Elbow Length	13.4	13.9	14.1	14.5	15.0	15.5	15.9	16.1	16.5
35.	Sitting Height	32.5	33.5	34.0	34.8	35.6	36.5	37.3	37.7	38.7
36.	Sleeve Length	26.2	28.8	29.4	30.2	31.3	32.2	33.4	34.2	36.1
37.	Stature	64.4	65.8	66.7	67.9	69.4	71.1	72.5	73.3	74.8
38.	Tragion-Anterior Chin Projection	4.7	4.8	4.9	5.0	5.2	5.3	5.5	5.6	5.8
39.	Tragion-Nasal Root Length	3.4	3.5	3.6	3.7	3.9	4.1	4.2	4.3	4.5
40.	Waist Circumference	27.2	28.6	29.5	30.9	32.7	34.4	36.0	37.0	38.6
41.	Waist Height (Outseam)	37.3	38.8	39.5	40.4	41.7	42.8	44.0	44.8	46.2
42.	Weight(in pounds)	123.6	135.9	142.4	153.2	166.5	179.8	193.2	199.7	212.5

APPENDIX D

INDEX OF BIVARIATE CHARTS*

*Numbers (1 to 42) at far left are the same as those in Appendix B and C.

Chest Circumference

Back Waist Length	32.3 - 33.0	33.1 - 33.8	33.9 - 34.6	34.7 - 35.4	35.5 - 36.2	36.3 - 37.0	37.0 - 37.7	37.8 - 38.5	38.6 - 39.3	39.4 - 40.1	40.2 - 40.9	41.0 - 41.7	41.8 - 42.5	42.5 - 43.2	
14.2 - 14.9			2			1		1		3					7
15.0 - 15.7			1	2	3				1						7
15.8 - 16.5		1	2	1	2	5	2	3	1	1	4	1			23
16.5 - 17.2	1		4	7	13	12	7	12	5	6	3		1		71
17.3 - 18.0	1	2	5	12	13	16	18	21	20	10	5	3	3		129
18.1 - 18.8		4	8	8	12	14	21	22	15	8	7	6		2	127
18.9 - 19.6			4	4	10	8	14	10	9	16	7	8	3	4	97
19.7 - 20.4	1			1	2	3	5	3	4	5	7				31
20.5 - 21.2					1		2	1	1						5
21.3 - 22.0			1						1	1					3
	3	7	27	35	56	59	69	73	57	50	33	18	7	6	500

Measurements are in Inches

Chest Circumference (x) Mean: 37.717 S.D.: 2.066
Back Waist Length (y) Mean: 18.172 S.D.: 1.170

r= .187
x= .331y + 31.702
y= .106x + 14.174

Chest Circumference

Seat Circumference	32.3 - 33.0	33.1 - 33.8	33.9 - 34.6	34.7 - 35.4	35.5 - 36.2	36.3 - 37.0	37.0 - 37.7	37.8 - 38.5	38.6 - 39.3	39.4 - 40.1	40.2 - 40.9	41.0 - 41.7	41.8 - 42.5	42.5 - 43.2	
31.5 - 32.2			1												1
32.3 - 33.0										1					1
33.1 - 33.8	1	2	3	2			1		1						10
33.9 - 34.6	1		1	3	2										7
34.7 - 35.4			6	4	7		2	3							22
35.5 - 36.2	1	4	4	12	12	11	3	1	1	1					50
36.3 - 37.0			6	6	10	6	4	3	5						40
37.0 - 37.7			5	4	13	22	16	9	9	2	2				82
37.8 - 38.5		1	1	2	5	7	17	13	14	6	2	1	1		70
38.6 - 39.3				2	6	4	13	23	10	13	5	2	1		83
39.4 - 40.1					1	3	9	10	5	18	7	5		2	60
40.2 - 40.9						1	3	5	7	4	9	3	1		33
41.0 - 41.7							1	6	3	3	3	2	3	1	22
41.8 - 42.5									2		1		1	1	5
42.5 - 43.2						1					2	3			6
43.3 - 44.0										2	2	1			5
44.1 - 44.8												1		1	2
44.9 - 45.6														1	1
	3	7	27	35	56	59	69	73	57	50	33	18	7	6	500

Measurements are in Inches

Chest Circumference (x) Mean: 37.717 S.D.: 2.066
Seat Circumference (y) Mean: 38.173 S.D.: 2.056

r= .696
x= .700y + 10.992
y= .693x + 12.041

Chest Circumference

Seat Width, Sitting	32.3 - 33.0	33.1 - 33.8	33.9 - 34.6	34.7 - 35.4	35.5 - 36.2	36.3 - 37.0	37.0 - 37.7	37.8 - 38.5	38.6 - 39.3	39.4 - 40.1	40.2 - 40.9	41.0 - 41.7	41.8 - 42.5	42.5 - 43.2	
11.81 - 12.20				1	1										2
12.21 - 12.59	2	1	2	1	1			1							8
12.60 - 12.98		2	6	4	5	5	1		1						24
12.99 - 13.38	1	2	10	10	17	6	7	4	3	2					62
13.39 - 13.77		2	4	7	9	18	14	11	9	1	1	2			78
13.78 - 14.16			4	8	10	7	18	16	7	6	3				79
14.17 - 14.56			1	4	7	11	13	18	13	10	8	2	1		86
14.57 - 14.95					4	6	9	11	12	11	7	4	1	1	66
14.96 - 15.34					2	3	4	4	8	9	3	3	1	2	39
15.35 - 15.74						2	2	5	3	6	5	6	2	3	34
15.75 - 16.13							1	2	1	2	4	1	1		12
16.14 - 16.53						1		1		2	1		1		6
16.54 - 16.92										1					1
16.93 - 17.31											1				1
	3	7	27	35	56	59	69	73	57	50	33	18	7	6	500

Measurements are in Inches

Chest Circumference (x) Mean: 37.717 S.D.: 2.066
Seat Width, Sitting (y) Mean: 14.187 S.D.: .872

r= .619
x= 1.467y + 16.905
y= .261x + 4.343

Shoulder Breadth	Chest Circumference														
	32.3 - 33.0	33.1 - 33.8	33.9 - 34.6	34.7 - 35.4	35.5 - 36.2	36.3 - 37.0	37.0 - 37.7	37.8 - 38.5	38.6 - 39.3	39.4 - 40.1	40.2 - 40.9	41.0 - 41.7	41.8 - 42.5	42.5 - 43.2	
15.0 - 15.7					1										1
15.8 - 16.5	2	3	3	1	1			1							11
16.5 - 17.2	1	3	10	8	7	7	5	2	2	1					46
17.3 - 18.0		1	9	21	31	25	23	22	18	8	5			1	164
18.1 - 18.8			4	5	13	23	31	35	26	13	10	7		1	168
18.9 - 19.6			1		3	3	8	11	10	22	10	3	2	2	75
19.7 - 20.4							1	2	1	6	8	6	5	1	30
20.5 - 21.2						1						1		1	3
21.3 - 22.0							1					1			2
	3	7	27	35	56	59	69	73	57	50	33	18	7	6	500

Measurements are in Inches

Chest Circumference (x) Mean: 37.717 S.D.: 2.066
Shoulder Breadth (y) Mean: 18.268 S.D.: .875

r= .617
x=1.458y + 11.082
y= .261x + 8.424

Sitting Height \ Chest Circumference	32.3 - 33.0	33.1 - 33.8	33.9 - 34.6	34.7 - 35.4	35.5 - 36.2	36.3 - 37.0	37.0 - 37.7	37.8 - 38.5	38.6 - 39.3	39.4 - 40.1	40.2 - 40.9	41.0 - 41.7	41.8 - 42.5	42.5 - 43.2	
31.5 - 32.2			1		1	1									3
32.3 - 33.0					2	2	2		1		1				8
33.1 - 33.8		1	2	2	4	3	2	3	3	3	2		1		26
33.9 - 34.6	1	4	9	6	10	9	10	9	9	2	2	1			72
34.7 - 35.4		1	6	12	12	17	12	24	10	10	4	3	1	2	114
35.5 - 36.2	1	1	5	7	13	11	26	16	12	19	6	7	1	1	126
36.3 - 37.0			2	4	8	12	11	11	7	9	9	4	3	1	81
37.0 - 37.7	1		2	3	5	2	3	7	12	2	6	2	1	2	48
37.8 - 38.5					1	2	3	2	1	4	2	1			16
38.6 - 39.3				1				1	2		1				5
39.4 - 40.1										1					1
	3	7	27	35	56	59	69	73	57	50	33	18	7	6	500

Measurements are in Inches

Chest Circumference (x) Mean: 37.717 S.D.: 2.066
Sitting Height (y) Mean: 35.608 S.D.: 1.271

r= .242
x= .394y + 23.687
y= .149x + 29.988

Chest Circumference

Sleeve Length	32.0 - 33.0	33.1 - 33.8	33.9 - 34.6	34.7 - 35.4	35.5 - 36.2	36.3 - 37.0	37.0 - 37.7	37.8 - 38.5	38.6 - 39.3	39.4 - 40.1	40.2 - 40.9	41.0 - 41.7	41.8 - 42.5	42.5 - 43.2	
24.4 - 25.1										2					2
25.2 - 25.9					1					1					2
26.0 - 26.7					2				1						3
26.8 - 27.5			1		1										2
27.6 - 28.3					1	1			1						3
28.4 - 29.1	1	2	5	1	1	1	5	2	1	2	3				24
29.2 - 29.9		2	3	6	9	10	4	9	5	2	1				51
30.0 - 30.7	1	1	3	10	16	14	14	14	7	4	6		1		91
30.7 - 31.4	1	1	6	6	11	9	16	18	13	10	3	5	1	3	103
31.5 - 32.2			5	5	7	11	15	13	11	13	12	4	2	2	100
32.3 - 33.0		1	3	4	4	7	5	12	9	4	4	2			55
33.1 - 33.8				2	1	3	7	3	7	4	2	3	1	1	34
33.9 - 34.6				1		1	1	2	1	3	1	1			11
34.7 - 35.4					1	1	2		1			1	1		7
35.5 - 36.2					1	1				3		2	1		8
36.3 - 37.0			1							2					3
37.0 - 37.7											1				1
	3	7	27	35	56	59	69	73	57	50	33	18	7	6	500

Measurements are in Inches

Chest Circumference (x) — Mean: 37.717 — S.D.:2.066
Sleeve Length (y) — Mean: 31.320 — S.D.:1.689

r=.259
x=.316y + 27.820
y=.212x + 23.324

Chest Circumference

Waist Circumference	32.3 - 33.0	33.1 - 33.8	33.9 - 34.6	34.7 - 35.4	35.5 - 36.2	36.3 - 37.0	37.0 - 37.7	37.8 - 38.5	38.6 - 39.3	39.4 - 40.1	40.2 - 40.9	41.0 - 41.7	41.8 - 42.5	42.5 - 43.2	
26.0 - 26.7		2	1												3
26.8 - 27.5	1		1	1	1										4
27.6 - 28.3	1	1	3	3	5										13
28.4 - 29.1		1	7	6	3	2									19
29.2 - 29.9	1		4	3	2	6	2	2	3						23
30.0 - 30.7		2	5	10	14	4	6	5	4	1	1				52
30.7 - 31.4			4	5	11	17	10	5	4	2					58
31.5 - 32.2			2	5	11	10	12	8	4	1					53
32.3 - 33.0					2	10	11	10	9	3	1				47
33.1 - 33.8		1		1	3	7	12	11	9	10	3	4		1	62
33.9 - 34.6					3	2	11	14	9	9	9	1	1		59
34.7 - 35.4				1			2	9	4	7	9	3			35
35.5 - 36.2					1	1	2	6	5	6	4	4			29
36.3 - 37.0								2	2	5	4	2	2	2	19
37.0 - 37.7							1	1	3	4	1	3	2	1	16
37.8 - 38.5											1	1	1		3
38.6 - 39.3									1	1				1	3
39.4 - 40.1										1				1	2
	3	7	27	35	56	59	69	73	57	50	33	18	7	6	500

Measurements are in Inches

Chest Circumference (x) Mean: 37.717 S.D.: 2.066
Waist Circumference (y) Mean: 32.696 S.D.: 2.489

r= .728
x= .604y + 17.969
y= .877x - .382

Chest Circumference

Weight	32.3 - 33.0	33.1 - 33.8	33.9 - 34.6	34.7 - 35.4	35.5 - 36.2	36.3 - 37.0	37.0 - 37.7	37.8 - 38.5	38.6 - 39.3	39.4 - 40.1	40.2 - 40.9	41.0 - 41.7	41.8 - 42.5	42.5 - 43.2	
110 - 119	1														1
120 - 129	1	3	6		1										11
130 - 139		1	2	11	7			1							22
140 - 149	1	2	12	11	17	12	7	3	1						66
150 - 159		1	7	7	16	15	18	7	5	2	1				79
160 - 169				6	12	22	19	25	22	3	1				110
170 - 179					3	9	22	17	13	16	6	1	1		88
180 - 189						1	2	15	10	15	10	7	1		61
190 - 199							1	4	5	6	10	5	3	4	38
200 - 209								1	1	6	5	4	1		18
210 - 219										1			1	2	4
220 - 229										1		1			2
	3	7	27	35	56	59	69	73	57	50	33	18	7	6	500

Chest Circumference is in Inches
Weight is in Pounds

Chest Circumference (x) Mean: 37.717 S.D.: 2.066
Weight (y) Mean: 165.772 S.D.: 18.899

r= .789
x= .086y + 23.461
y= 7.217x - 106.432

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Bitragion-Menton Arc

Face Breadth

	4.94 - 5.01	5.02 - 5.09	5.10 - 5.17	5.18 - 5.25	5.26 - 5.33	5.34 - 5.41	5.41 - 5.49	5.49 - 5.57	5.57 - 5.64	5.65 - 5.72	5.73 - 5.80	5.81 - 5.88	5.89 - 5.96	5.97 - 6.04	6.04 - 6.12	6.12 - 6.20	6.20 - 6.27	
11.52 - 11.71			1	2	1		1	1		1		1						8
11.71 - 11.90		1	1	2	3	3	3	2				1						16
11.91 - 12.10	1		1	1	4	7	2	3	3	5		1						30
12.11 - 12.30		1	1	5	5	8	2	7	4	4	2	4	1					44
12.30 - 12.49			1	6	5	12	11	10	11	13	1	2						72
12.50 - 12.69			2	2	3	12	13	18	16	18	10	7						101
12.70 - 12.89				1	4	4	4	12	10	7	3	4		2				51
12.89 - 13.09				2	5	11	5	9	15	15	15	9	2	3				91
13.09 - 13.28				1	1	1	4	2	4	4	7	5	1					30
13.29 - 13.48					1	1	5	6	5	6	6	5	1	2			1	39
13.48 - 13.68										2	3	3		1		1		10
13.68 - 13.87									1	3		3		1				8
	1	2	7	22	32	59	50	70	71	78	47	45	5	9		1	1	500

Measurements are in Inches

Face Breadth (x) Mean: 5.568 S.D.: .200
Bitragion-Menton Arc (y) Mean:12.676 S.D.: .456

r = .417
x = .183y + 3.248
y = .952x + 7.375

Face Breadth

Bitragion-Minimum Frontal Arc	4.94 - 5.01	5.02 - 5.09	5.10 - 5.17	5.18 - 5.25	5.26 - 5.33	5.34 - 5.41	5.42 - 5.49	5.49 - 5.57	5.57 - 5.64	5.65 - 5.72	5.73 - 5.80	5.81 - 5.88	5.89 - 5.96	5.97 - 6.04	6.04 - 6.12	6.12 - 6.20	6.20 - 6.27	
10.93 - 11.12				1	1		1	1										4
11.12 - 11.31				1	5	4	2											12
11.32 - 11.52				4	2	4	5	13	2	1								31
11.52 - 11.71	1		5	5	3	12	6	10	8	9	3	2						64
11.71 - 11.90				3	10	11	7	12	11	10	5	4	1					74
11.91 - 12.10		2	1	5	6	11	10	12	24	20	11	9		2			1	114
12.11 - 12.30			1	2	1	10	9	11	16	16	12	11		1				90
12.30 - 12.49					4	4	7	7	4	15	13	6	1	1				62
12.50 - 12.69						1	3	3	3	4	1	7	2	1				25
12.70 - 12.89									3	1	2	5	1	2				14
12.89 - 13.09						1				1								2
13.09 - 13.28												1		2		1		4
13.29 - 13.48				1		1				1								3
13.48 - 13.68								1										1
	1	2	7	22	32	59	50	70	71	78	47	45	5	9		1	1	500

Measurements are in Inches

Face Breadth (x) Mean: 5.568 S.D.: .200
Bitragion-Minimum Frontal Arc (y) Mean: 12.028 S.D.: .398

r= .410
x= .206y +3.090
y= .817x +7.479

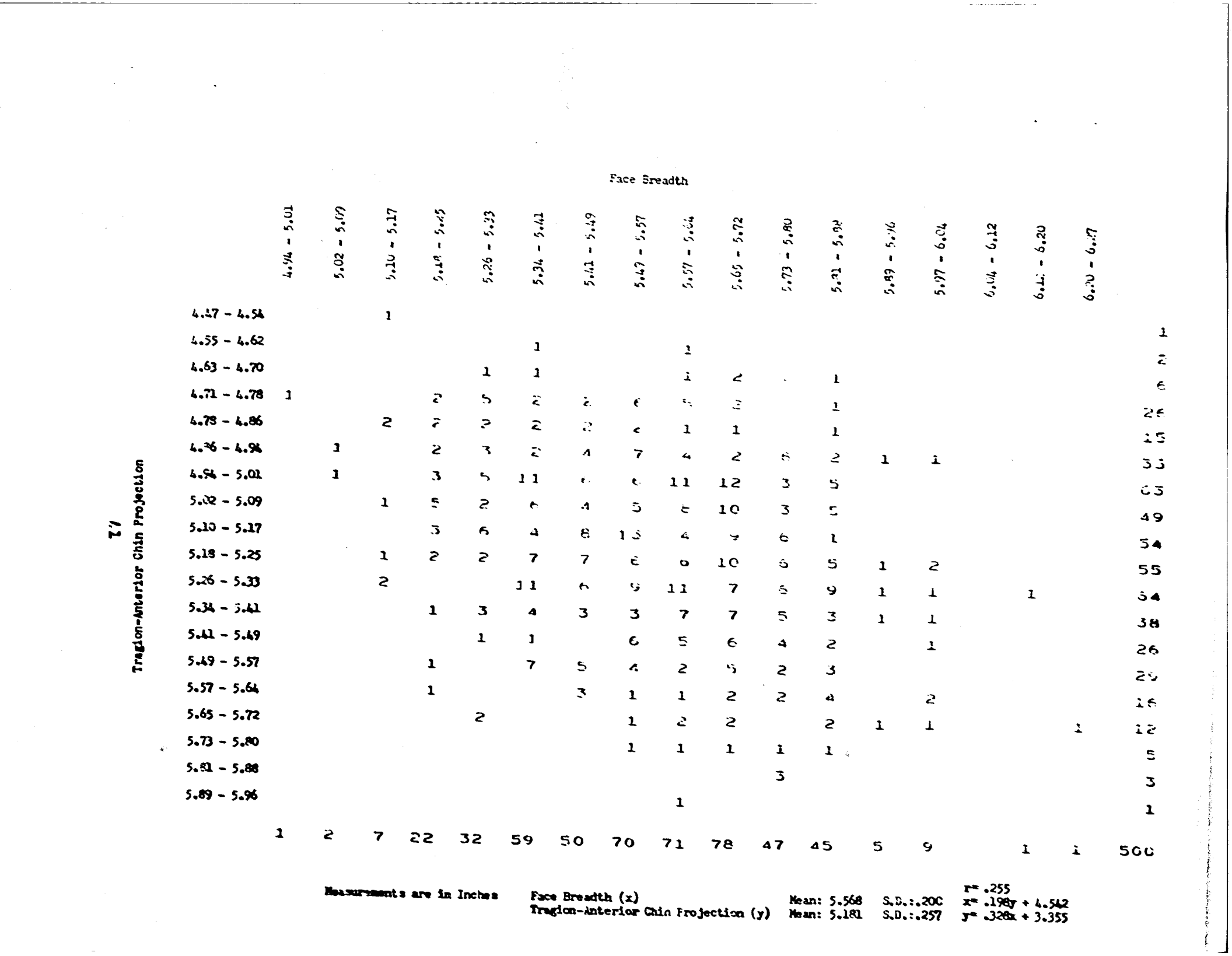
Face Breadth

Head Circumference	4.94 - 5.01	5.02 - 5.09	5.10 - 5.17	5.18 - 5.25	5.26 - 5.33	5.34 - 5.41	5.41 - 5.49	5.45 - 5.57	5.57 - 5.64	5.65 - 5.72	5.73 - 5.80	5.81 - 5.88	5.89 - 5.96	5.97 - 6.04	6.04 - 6.12	6.12 - 6.20	6.20 - 6.27	
20.97 - 21.16				1														1
21.16 - 21.35						2		2										4
21.36 - 21.55	1	1	2	2	1	1	2	4	2	1								17
21.56 - 21.75				1	7	3	4	6	4	2								27
21.75 - 21.94			2	3	2	9	2	3	3	4	2	2						31
21.95 - 22.14			2	2	6	13	9	6	3	10	6	1	1				1	60
22.15 - 22.34				1	4	8	5	12	9	6	6	5						56
22.34 - 22.53		1	1	4	4	4	7	14	11	16	6	6	1					75
22.54 - 22.73				3	1	10	8	8	10	14	4	5	1					64
22.74 - 22.93				3	1	7	5	10	17	10	5	10	1	2				71
22.93 - 23.12				2	1	1	2	3	3	6	5	4		2				29
23.13 - 23.32					5	1	4	1	6	3	3	5		2				30
23.33 - 23.52						1	1	1	2	4	4	3		1		1		18
23.52 - 23.72									1	1	5	3		1				11
23.72 - 23.91							1				1	1	1					4
23.92 - 24.11										1				1				2
	1	2	7	22	32	59	50	70	71	78	47	45	5	9		1	1	500

Measurements are in Inches

Face Breadth (x) Mean: 5.568 S.D.: .200
Head Circumference (y) Mean: 22.489 S.D.: .545

$r = .379$
$x = .139y + 2.442$
$y = 1.035x + 16.726$


Face Breadth
Tragion-Anterior Chin Projection
4.94 - 5.01
5.02 - 5.09
5.10 - 5.17
5.18 - 5.25
5.26 - 5.33
5.34 - 5.41
5.42 - 5.49
5.50 - 5.57
5.58 - 5.64
5.65 - 5.72
5.73 - 5.80
5.81 - 5.88
5.89 - 5.96
5.97 - 6.04
6.04 - 6.12
6.13 - 6.20
6.20 - 6.27
4.47 - 4.54
4.55 - 4.62
4.63 - 4.70
4.71 - 4.78
4.78 - 4.86
4.86 - 4.94
4.94 - 5.01
5.02 - 5.09
5.10 - 5.17
5.18 - 5.25
5.26 - 5.33
5.34 - 5.41
5.42 - 5.49
5.49 - 5.57
5.57 - 5.64
5.65 - 5.72
5.73 - 5.80
5.81 - 5.88
5.89 - 5.96
1 2 7 22 32 59 50 70 71 78 47 45 5 9 1 1 500
Measurements are in Inches
Face Breadth (x) Mean: 5.568 S.D.:.200
Tragion-Anterior Chin Projection (y) Mean: 5.181 S.D.:.257
r= .255
x= .198y + 4.542
y= .328x + 3.355

Face Breadth

Tragion-Nasal Root Length	4.94 - 5.01	5.02 - 5.09	5.10 - 5.17	5.18 - 5.25	5.26 - 5.33	5.34 - 5.41	5.42 - 5.49	5.49 - 5.57	5.57 - 5.64	5.65 - 5.72	5.73 - 5.80	5.81 - 5.88	5.89 - 5.96	5.97 - 6.04	6.04 - 6.12	6.13 - 6.20	6.20 - 6.27	
3.29 - 3.36						1				1		1						3
3.37 - 3.44						1	2				1							4
3.45 - 3.52			1		1	1	2	1	2	1	1							10
3.53 - 3.60				1	3	1	3	6	3	5				1				23
3.60 - 3.68			1	3	6	2	5	9	1	4	1	1		1				34
3.68 - 3.75	1		1	7	3	13	5	9	13	2	3	1	2				1	61
3.76 - 3.83			1	1	4	8	4	10	9	9	9					1		56
3.84 - 3.91			2	2	5	8	12	8	6	14	7	11						75
3.92 - 3.99		1	1	5	1	9	7	8	9	11	6	9		2				69
4.00 - 4.07					4	5	5	5	9	9	5	3	1	2				48
4.08 - 4.15				1	1	4	3	8	9	6	5	9	1	1				48
4.15 - 4.23		1			3	4	1	4	4	7	6	5		1				36
4.23 - 4.31				1		1		1	1	7	2	2	1					16
4.31 - 4.38				1	1				3		1	2						8
4.39 - 4.46						1	1		1	1				1				5
4.47 - 4.54									1	1								2
4.55 - 4.62																		
4.63 - 4.70								1				1						2
	1	2	7	22	32	59	50	70	71	78	47	45	5	9		1	1	500

Measurements are in Inches

Face Breadth (x) — Mean: 5.568 — S.D.: .200
Tragion-Nasal Root Length (y) — Mean: 3.907 — S.D.: .222

r= .221
x= .199y + 4.791
y= .245x + 2.543

Face Length

Bitragion-Menton Arc	4.08 - 4.15	4.15 - 4.23	4.23 - 4.31	4.31 - 4.38	4.39 - 4.46	4.47 - 4.54	4.55 - 4.62	4.63 - 4.70	4.71 - 4.78	4.78 - 4.86	4.86 - 4.94	4.94 - 5.01	5.02 - 5.09	5.10 - 5.17	5.18 - 5.25	5.26 - 5.33	5.34 - 5.41	5.41 - 5.49	
11.52 - 11.71				2		1	1	1	2	1									8
11.71 - 11.90	1	1		1	1	1	4	4	3										16
11.91 - 12.10	1	1	1	3	3	10	3	1	2	2	1			1	1				30
12.11 - 12.30	3	2		2	4	3	7	4	5	2	3	4	2		2			1	44
12.30 - 12.49	1	2	3	7	8	7	6	11	5	11	5	3		2	1				72
12.50 - 12.69		2	2	8	9	12	11	14	12	5	10	10	2	2	2				101
12.70 - 12.89		3	2	1	4	10	7	4	8	3	3	2	1	1	1		1		51
12.89 - 13.09			2	6	6	14	7	13	7	12	9	7	4	3	1				91
13.09 - 13.28				2		4	5	3	4	4	3	1	2		2				30
13.29 - 13.48		1				4	8	5	4	7	3	2	1		3	1			39
13.48 - 13.68					3			1	1	3	1	1							10
13.68 - 13.87			1	1				2	1			1	1		1				8
	6	12	11	33	38	66	59	63	54	50	38	31	13	9	14	1	1	1	500

Measurements are in Inches

Face Length (x) Mean: 4.671 S.D.: .244
Bitragion-Menton Arc (y) Mean: 12.676 S.D.: .456

r= .185
x= .099y + 3.416
y= .346x +11.060

Face Length

Bitragion-Minimum Frontal Arc	4.08 - 4.15	4.15 - 4.23	4.23 - 4.31	4.31 - 4.38	4.39 - 4.46	4.47 - 4.54	4.55 - 4.62	4.63 - 4.7[illegible]	4.7[illegible] - 4.78	4.79 - 4.86	[illegible] - 4.94	4.94 - 5.01	5.02 - 5.09	5.1[illegible] - 5.17	5.[illegible] - 5.25	5.26 - 5.33	5.34 - 5.41	5.41 - 5.49	
10.93 - 11.12				1			2		1										4
11.13 - 11.31		2		1	3	2	1	1			1	1							12
11.32 - 11.51	1	1	1	3	2	2	4	2	6	3	3	4			1				31
11.52 - 11.71		2		8	5	11	5	6	8	5	4	3		1	1				64
11.71 - 11.90	3	3	3	8	7	13	4	8	1	6	6	5	2	1	2				74
11.91 - 12.10		2	3	7	10	13	12	20	12	5	12	7	7	2	2				114
12.11 - 12.30			2	3	3	11	15	13	11	7	9	8		4	3	1			96
12.30 - 12.49	2	2	1	2	4	8	9	3	10	10	2	4	1		3			1	62
12.50 - 12.69						4	4	6	1	4		1	2	1	2				25
12.70 - 12.89					1			4	3	2	1	1	1				1		14
12.89 - 13.09										2									2
13.09 - 13.28			1		1		1			1									4
13.29 - 13.48									1	2									3
13.48 - 13.68							1												1
	6	12	11	33	38	66	59	63	54	50	38	31	13	9	14	1	1	1	500

Measurements are in Inches

Face Length (x)
Bitragion-Minimum Frontal Arc (y)

Mean: 4.671 S.D.: .244
Mean: 12.028 S.D.: .398

r= .179
x= .110y + 3.348
y= .293x + 10.659

Face Breadth

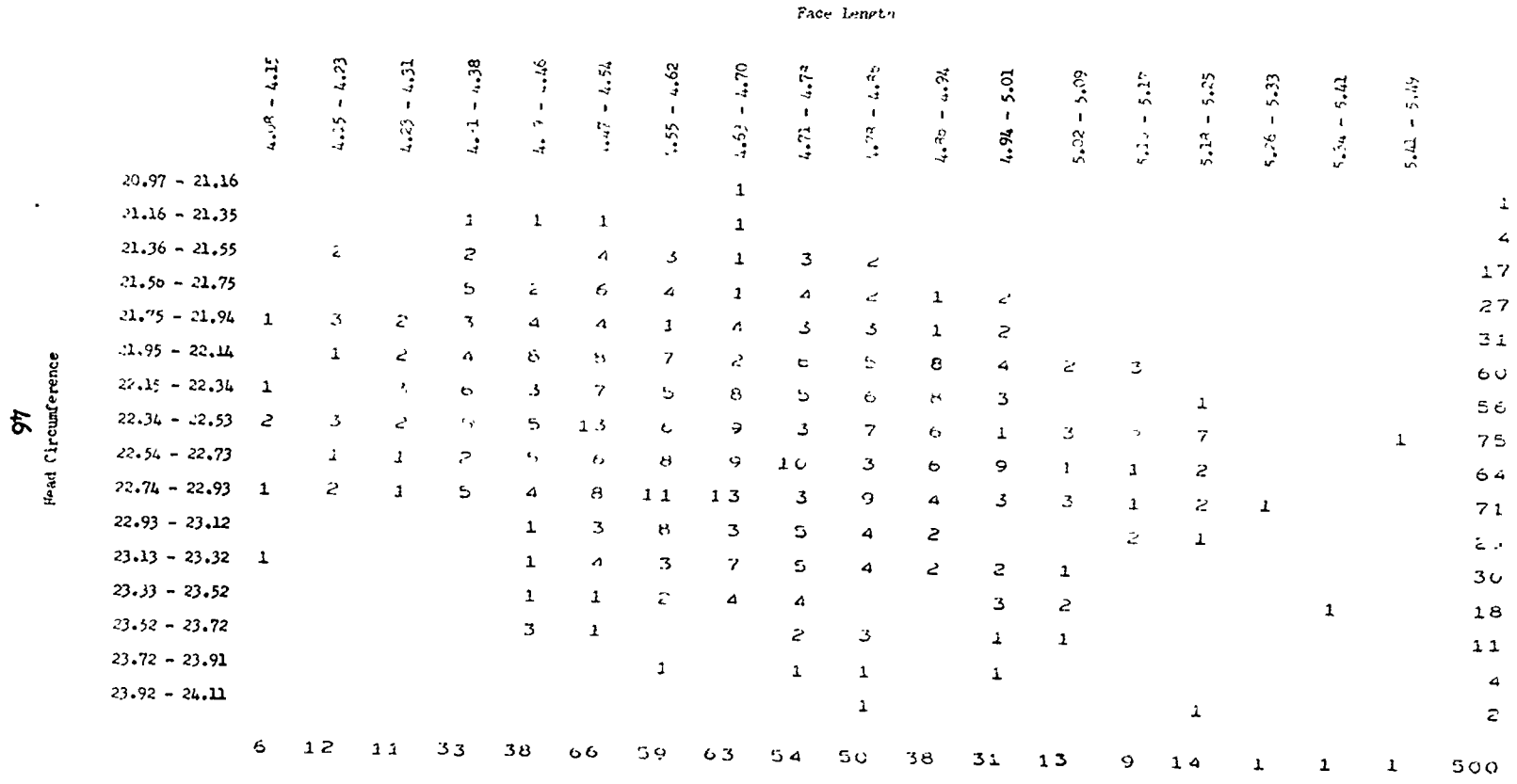
Face Length

Face Breadth	4.08 – 4.15	4.15 – 4.23	4.23 – 4.31	4.31 – 4.38	4.39 – 4.46	4.47 – 4.54	4.55 – 4.62	4.63 – 4.70	4.71 – 4.78	4.79 – 4.86	4.86 – 4.94	4.94 – 5.01	5.02 – 5.09	5.10 – 5.17	5.18 – 5.25	5.26 – 5.33	5.34 – 5.41	5.41 – 5.49
4.94 – 5.01						1												1
5.02 – 5.09									1				1					2
5.10 – 5.17		1				1	3		2									7
5.18 – 5.25	1	1		2	3	2	1	3	3	3		3						22
5.26 – 5.33		2		5	2	5	2	3	5	1	2		1					32
5.34 – 5.41	1	2	2	7	5	6	7	9	4	8	3	3	1			1		59
5.41 – 5.49		1		3	4	7	10	5	7	1	3	3	2	3		1		50
5.49 – 5.57	1	1	1	2	5	7	14	7	4	10	10	3		3		2		70
5.57 – 5.64	1	1	2	5	4	10	9	11	9	6	3	3	1	1		2		71
5.65 – 5.72	1	1	2	6	9	13	3	5	5	10	8	7		2		5	1	78
5.73 – 5.80				2	2	7	6	5	7	3	6	5	2			2		47
5.81 – 5.88	1	1		1	2	3	3	11	6	6	3	4	4					45
5.89 – 5.96					1		1	2										5
5.97 – 6.04			1			1		2	1	2						1		9
6.04 – 6.12																		
6.12 – 6.20					1													1
6.20 – 6.27													1					1
	6	12	11	33	38	66	59	63	54	50	38	31	13	9	14	1	1	506

Measurements are in Inches

Face Length (x) Mean: 4.671 S.D.: .244
Face Breadth (y) Mean: 5.568 S.D.: .200

$r^2 = .164$
$x^2 = .200y + 3.557$
$y^2 = .134x + 4.942$



Measurements are in Inches

Pace Length (x) Mean: 4.671 S.D.: .244
Head Circumference (y) Mean: 22.489 S.D.: .545

r= .197
x= .088y + 2.692
y= .441x +20.429

Face Length

Tragion-Anterior Chin Projection	4.08 - 4.15	4.15 - 4.23	4.23 - 4.31	4.31 - 4.38	4.39 - 4.46	4.47 - 4.54	4.55 - 4.62	4.63 - 4.70	4.71 - 4.78	4.78 - 4.86	4.86 - 4.94	4.94 - 5.01	5.02 - 5.09	5.10 - 5.17	5.18 - 5.25	5.26 - 5.33	5.34 - 5.41	5.42 - 5.49	
4.47 - 4.54									1										1
4.55 - 4.62								1	1										2
4.63 - 4.70				2		3					1								6
4.71 - 4.78	2			1	4	5	5	2	2	2					1				26
4.78 - 4.86	1			2	1	2	4	2	1		2								15
4.86 - 4.94	2	1	1	3	1	6	4	3	2	3	3	1	3		1			1	35
4.94 - 5.01		4	1	4	4	6	6	10	10	7	4	3	1	1	2				63
5.02 - 5.09		1	3	5	10	4	2	8	4	5		6		1					49
5.10 - 5.17	1	2	1	2	4	5	9	7	8	5	5	3	1	1					54
5.18 - 5.25		2		4	3	11	4	3	4	2	6	4		3	3		1		55
5.26 - 5.33		1	3	3	5	4	9	8	7	4	8	4	4	1	3				64
5.34 - 5.41				3	3	9	6	7	3	2	2	1	1	1					38
5.41 - 5.49			1		2	5	3	5	3	1	4	1		1					26
5.49 - 5.57				1	1	6	2	1	4	6	1	4	1		2				29
5.57 - 5.64			1	1			2	3		3	1	2	1		1	1			16
5.65 - 5.72		1		1			2	1	1	3	1	1	1						12
5.73 - 5.80							1	2		1		1							5
5.81 - 5.88				1					1	1									3
5.89 - 5.96															1				1
	6	12	11	33	38	66	59	63	54	50	38	31	13	9	14	1	1	1	500

Measurements are in Inches

Face Length (x) — Mean: 4.671 — S.D.: .244
Tragion-Anterior Chin Projection (y) — Mean: 5.181 — S.D.: .257

r= .167
x= .158y + 3.852
y= .177x + 4.354

Face Length

Tragion-Nasal Root Length	4.08 - 4.15	4.15 - 4.23	4.23 - 4.31	4.31 - 4.38	4.39 - 4.46	4.47 - 4.54	4.55 - 4.62	4.63 - 4.70	4.71 - 4.78	4.78 - 4.86	4.86 - 4.94	4.94 - 5.01	5.02 - 5.09	5.10 - 5.17	5.18 - 5.25	5.26 - 5.33	5.34 - 5.41	5.41 - 5.49	
3.29 - 3.36					1			2											3
3.37 - 3.44					1	1		2											4
3.45 - 3.52	1				3	1	2			1	1	1							10
3.52 - 3.60		1		4	1	4	2	2	3	2					1				22
3.60 - 3.68	1	2	1	3	3	7	5	1	2	4	2	1		1					34
3.68 - 3.75	1	1	1	9	2	4	7	9	9	4	4	6	3	1					61
3.76 - 3.83		2	1	6	7	8	10	3	3	6	4	2	1		3				56
3.84 - 3.91	2	3	2	3	6	9	8	9	8	6	11	5	1						75
3.92 - 3.99	1	2	2	3	6	9	4	11	12	5	3	6	1	1	3				69
4.00 - 4.07		1	1	1	1	8	4	5	4	9	4	2	4	1	1		1		48
4.03 - 4.15			1	3	1	5	8	5	4	5	5	3	3		1			1	48
4.15 - 4.23			1			5	6	6	6	4	3	3		1	1				36
4.23 - 4.31					1	4	2	3	2	1	1			1	1				16
4.31 - 4.38				1				2	1	1		2		1					8
4.39 - 4.46			1					1		1				1		1			5
4.47 - 4.54							1			1									2
4.55 - 4.62																			
4.63 - 4.70						1		1											2
	6	12	11	33	38	66	59	63	54	50	38	31	13	9	14	1	1	1	500

Measurements are in Inches

Face Length (x) Mean: 4.671 S.D.: .244

Tragion-Nasal Root Length (y) Mean: 3.907 S.D.: .222

r = .206

x = .227y + 3.784

y = .188x + 3.029

Foot Breadth

Ball Foot Circumference	2	4	8	14	38	51	61	63	67	57	40	26	24	9	3	1	2	500
8.17 - 8.39	1																	1
8.37 - 8.58			1	1	1													3
8.59 - 8.75			1	1	5	2	1											10
8.76 - 8.95				2	4	4	6	3										19
8.96 - 9.15			1		6	5	15	3	3	1								34
9.16 - 9.35				1	7	4	13	6	5	2								38
9.35 - 9.54				1	8	11	14	11	10	7	2							64
9.55 - 9.74				1	9	4	12	11	12	7	6	2						65
9.75 - 9.94					5	11	11	5	10	13	6	1	1					65
9.94 - 10.13				1		3	4	9	10	11	7	4	4	1				64
10.14 - 10.33				1		1	3	7	5	8	2	3	3	3				36
10.34 - 10.53							2	3	3	7	5	4	5	1	1			31
10.54 - 10.73						1	2	3	3	7	6	5	2	2	1			33
10.73 - 10.92						1	2	1	5	2	2	3	4	3				23
10.93 - 11.12									2			1		1	1			5
11.13 - 11.32								1	1	1			1		1			5
11.32 - 11.51												1	1					2
11.52 - 11.71											1							1
11.72 - 11.91												1	1				1	2
	2	4	8	14	38	51	61	63	67	57	40	26	24	9	3	1	2	500

Measurements are in Inches

Foot Breadth (x) Mean: 3.990 S.D.: .211
Ball Foot Circumference (y) Mean: 9.797 S.D.: .624

r = .648
x = .219y + 1.844
y = 1.915x + 2.156

Ball Foot Circumference

Foot Length

Foot Breadth	3.37 – 3.44	3.45 – 3.52	3.53 – 3.60	3.61 – 3.68	3.69 – 3.75	3.76 – 3.83	3.84 – 3.91	3.92 – 3.99	4.00 – 4.07	4.08 – 4.15	4.16 – 4.23	4.24 – 4.31	4.32 – 4.38	4.39 – 4.46	4.47 – 4.54	4.55 – 4.62	4.63 – 4.70	
8.56 – 8.75					1													1
8.76 – 8.95																		
8.96 – 9.15						1												1
9.16 – 9.35							1											1
9.36 – 9.54		1							1									3
9.55 – 9.74		1	3			1		1		1								7
9.75 – 9.94			1	1	4	4	2	2	1	1								14
9.95 – 10.13			1	1	4	4	15	5	2	3								37
10.14 – 10.33		2	2	2	2	10	15	9	6	3	3							56
10.34 – 10.52			1	1	6	11	10	14	1.	6	7	4	2					75
10.53 – 10.72	1		2	3	5	7	17	11	12	11	6	5	3					55
10.73 – 10.92				4	6	9	22	9	14	15	5	1	1	1	1			23
10.93 – 11.12						1	8	5	4	14	6	4	7	1	1			52
11.13 – 11.32					1	4	1	4	8	9	7	7	6	5	1			53
11.33 – 11.51					1		1	2	4	3	2	3	3					18
11.52 – 11.71					1			4	4	4	2	2	1					9
11.72 – 11.90					4							1		1			2	5
11.91 – 12.10												1	1	1		1		3
12.11 – 12.30												1	1					2
	1	5	8	14	30	51	51	63	57	67	40	26	24	9	3	1	2	388

Measurements are in Inches

Foot Length (x) Mean: 10.863 S.D.: .488
Foot Breadth (y) Mean: 3.990 S.D.: .211

r = .525
x = 1.215y + 5.815
y = .227x + 1.569

Foot Breadth

Hand Circumference

Hand Breadth

Hand Circumference	2.97 - 3.05	3.05 - 3.12	3.13 - 3.20	3.21 - 3.28	3.29 - 3.36	3.37 - 3.44	3.45 - 3.52	3.52 - 3.60	3.60 - 3.68	3.68 - 3.75	3.76 - 3.83	3.84 - 3.91	3.92 - 3.99	
7.33 - 7.57			2	3	1									6
7.58 - 7.77		1	3	4	3									11
7.78 - 7.97	1		10	14	5			1						38
7.97 - 8.16			4	5	23	12	5	4						53
8.17 - 8.36			1	8	23	24	13	18	6	1	1			114
8.37 - 8.56				2	7	21	24	32	5	2				94
8.56 - 8.75			1		3	7	17	30	14	4	1	1		78
8.76 - 8.95						1	2	13	23	15	3			57
8.96 - 9.15							1	3	12	16	3			35
9.15 - 9.34					1			1	2	1	3	1	1	10
9.35 - 9.54												2		2
9.55 - 9.74											1	1		2
	1	1	21	36	70	98	62	102	62	38	13	5	1	500

Measurements are in Inches

Hand Breadth (x) Mean: 3.484 S.D.: .161
Hand Circumference (y) Mean: 8.450 S.D.: .375

r= .806
x= .3477 + .552
y= 1.874x +1.921

Hand Breadth	Hand Length: 6.40 - 6.59	6.60 - 6.79	6.79 - 6.98	6.99 - 7.18	7.19 - 7.38	7.38 - 7.57	7.58 - 7.77	7.78 - 7.97	7.97 - 8.16	8.17 - 8.36	8.37 - 8.56	
2.97 - 3.05			1									1
3.05 - 3.12			1									1
3.13 - 3.20		2	2	8	3	3	1	2				21
3.21 - 3.28	1	2	7	8	6	7	1	4				36
3.29 - 3.36		1	12	13	20	14	6	3	1			70
3.37 - 3.44		1	3	13	27	22	12	6	4			88
3.45 - 3.52	1		4	6	13	20	11	7				62
3.52 - 3.60		3	1	10	18	30	24	7	9			102
3.60 - 3.68					9	14	18	15	5		1	62
3.68 - 3.75				1	3	6	8	5	10	4	1	38
3.76 - 3.83					1	3	3	3	1	1	1	13
3.84 - 3.91							1	1	2		1	5
3.92 - 3.99							1					1
	2	9	31	59	100	119	86	53	32	5	4	500

Measurements are in Inches

Hand Length (x) Mean: 7.471 S.D.: .344
Hand Breadth (y) Mean: 3.484 S.D.: .161

r= .506
x= 1.079y + 3.712
y= .237x + 1.713

Hand Length

Hand Circumference	6.40 - 6.59	6.60 - 6.79	6.79 - 6.98	6.99 - 7.18	7.19 - 7.38	7.38 - 7.57	7.58 - 7.77	7.78 - 7.97	7.97 - 8.16	8.17 - 8.36	8.37 - 8.56	
7.38 - 7.57		1		2	1	2						6
7.58 - 7.77	1	1	2	2	4			1				11
7.78 - 7.97		2	8	11	8	6	2	1				38
7.97 - 8.16		1	6	14	17	9	4	2				53
8.17 - 8.36	1	3	10	17	25	32	14	11	1			114
8.37 - 8.56		1	4	8	20	28	18	9	6			94
8.56 - 8.75			1	4	12	23	21	7	10			78
8.76 - 8.95					7	15	19	8	5	2	1	57
8.96 - 9.15				1	6	2	6	10	7	2	1	35
9.15 - 9.34						2	1	3	2	1	1	10
9.35 - 9.54									1		1	2
9.55 - 9.74							1	1				2
	2	9	31	59	100	119	86	53	32	5	4	500

Measurements are in Inches

Hand Length (x) Mean: 7.471 S.D.: .344
Hand Circumference (y) Mean: 8.450 S.D.: .375

r= .559
x= .513y + 3.136
y= .609x + 3.900

Head Breadth

Bitragion-Coronal Arc	5.41 - 5.60	5.61 - 5.80	5.81 - 6.00	6.00 - 6.19	6.20 - 6.39	6.40 - 6.59	6.60 - 6.79	6.79 - 6.98	6.99 - 7.18	
12.30 - 12.49		1								1
12.50 - 12.69			1							1
12.70 - 12.89			3	2						5
12.89 - 13.09	1	1	5	4						11
13.09 - 13.28		8	14	7						29
13.29 - 13.48	1	10	12	11	4					38
13.48 - 13.68		7	20	28	11	2				68
13.69 - 13.87		3	23	42	7	1				76
13.88 - 14.07		2	17	42	27	6				94
14.08 - 14.27			9	31	13	4	2	1	1	61
14.27 - 14.46			2	27	29	8	1			67
14.47 - 14.66				7	9	5	1			22
14.67 - 14.86				5	8	7	1			21
14.86 - 15.05				1	1	1		1		4
15.06 - 15.25							1	1		2
	2	32	106	207	109	34	6	3	1	500

Measurements are in Inches

Head Breadth (x) Mean: 6.118 S.D.: .213
Bitragion-Coronal Arc (y) Mean:13.914 S.D.: .452

r= .592
x= .279y + 2.236
y= 1.255x + 6.236

Head Breadth

Face Breadth	5.41 - 5.60	5.61 - 5.80	5.81 - 6.00	6.00 - 6.20	6.20 - 6.39	6.40 - 6.59	6.60 - 6.79	6.79 - 6.98	6.99 - 7.18	
4.94 - 5.01		1								1
5.02 - 5.09		1	1							2
5.10 - 5.17		3	3	1						7
5.18 - 5.25	1	5	6	9	1					22
5.26 - 5.33	1	4	14	13						32
5.34 - 5.41		5	23	24	6	1				59
5.41 - 5.49		4	12	19	13	2				50
5.49 - 5.57		5	19	30	13	2		1		70
5.57 - 5.64		3	15	36	15	2				71
5.65 - 5.72			8	37	21	10	1	1		78
5.73 - 5.80		1	3	22	14	6			1	47
5.81 - 5.88			2	13	21	7	1	1		45
5.89 - 5.96					2	2	1			5
5.97 - 6.04				3	2	2	2			9
6.04 - 6.12										
6.12 - 6.20							1			1
6.20 - 6.27					1					1
	2	32	106	207	109	34	6	3	1	500

Measurements are in Inches

Head Breadth (x) Mean: 6.118 S.D.:.213
Face Breadth (y) Mean: 5.568 S.D.:.200

r= .535
x= .571y + 2.939
y= .501x + 2.503

Head Breadth

Head Circumference	5.41 - 5.60	5.61 - 5.80	5.81 - 6.00	6.00 - 6.20	6.20 - 6.39	6.40 - 6.59	6.60 - 6.79	6.79 - 6.98	6.99 - 7.18	
20.97 - 21.16	1									1
21.16 - 21.35			3		1					4
21.36 - 21.55		7	[illegible]	1						17
21.56 - 21.75	1	2	[illegible]	[illegible]	1					37
21.75 - 21.94		[illegible]	[illegible]	[illegible]	5	2				31
21.95 - 22.14		5	[illegible]	27	15	1				[illegible]
22.15 - 22.34		[illegible]	[illegible]	[illegible]	9					56
22.34 - 22.53		3	17	33	20	2				75
22.54 - 22.73		4	10	33	9	8				64
22.74 - 22.93		2	10	31	20	5	2	1		71
22.93 - 23.12			5	10	11	1	1	1		29
23.13 - 23.32			2	16	7	3	1	1		30
23.33 - 23.52			2	2	7	5	1		1	18
23.52 - 23.72				3	3	5				11
23.72 - 23.91				1	1	1	1			4
23.92 - 24.11				1		1				2
	2	32	106	207	109	34	6	3	1	500

Measurements are in Inches

Head Breadth (x) Mean: 6.118 S.D.: .213
Head Circumference (y) Mean:22.489 S.D.: .545

r= .476
x= .186y + 1.935
y= 1.216x +15.050

Head Height											
4.04 - 4.23					1						1
4.24 - 4.42					1						1
4.43 - 4.62			3	10	16	1	1		1		36
4.63 - 4.82			7	18	35	21	4				85
4.82 - 5.01	1	15	32	70	32	8	1	1			160
5.02 - 5.21	1	6	30	50	33	8	1				129
5.22 - 5.41			15	24	12	9	2	1			63
5.41 - 5.60			1	8	6	3	1	1			20
5.61 - 5.80		1		2							3
5.81 - 6.00						1					1
6.00 - 6.20					1						1
	2	32	106	207	109	34	6	3	1		500

Measurements are in Inches

Head Breadth (x) Mean: 6.118 S.D.: .213 $x = .142y + 5.410$
Head Height (y) Mean: 4.986 S.D.: .251 $y = .196x + 3.787$

$r = .167$

Head Breadth

Sagittal Arc	5.40 - 5.60	5.61 - 5.80	5.81 - 6.00	6.00 - 6.20	6.20 - 6.39	6.40 - 6.59	6.60 - 6.79	6.79 - 6.98	6.99 - 7.18	
11.91 - 12.10				1						1
12.11 - 12.30	1		1							2
12.30 - 12.49					1					1
12.50 - 12.69			3	2	2					7
12.70 - 12.89		2		3	4	1				10
12.89 - 13.09	1	3	5	17	5	1				32
13.09 - 13.28		3	17	11	10	1				42
13.29 - 13.48		3	12	14	9	1		1		40
13.48 - 13.68		6	18	31	13	2	1			71
13.68 - 13.87		6	15	29	16	8	3			77
13.88 - 14.07		7	14	34	14	3		1	1	74
14.08 - 14.27			11	25	18	8	1			63
14.27 - 14.46		1	5	21	5	2	1	1		36
14.47 - 14.66		1	4	9	6	4				24
14.67 - 14.86			1	9	2	1				13
14.86 - 15.05				1	1	2				4
15.06 - 15.25					1					1
15.26 - 15.45					2					2
	2	32	106	207	109	34	6	3	1	500

Measurements are in Inches

Head Breadth (x) Mean: 6.118 S.D.: .213
Sagittal Arc (y) Mean:13.781 S.D.: .522

r= .184
x= .075y + 5.084
y= .449x +11.034

Head Length

Bitragion-Coronal Arc	6.79 - 6.98	6.99 - 7.18	7.19 - 7.38	7.38 - 7.57	7.58 - 7.77	7.78 - 7.97	7.97 - 8.16	8.17 - 8.36	8.37 - 8.56	8.56 - 8.75	
12.30 - 12.49				1							1
12.50 - 12.69							1				1
12.70 - 12.89			1	2	1	1					5
12.89 - 13.09		1	1	3	2	3	1				11
13.09 - 13.28			3	10	6	7	3				29
13.29 - 13.48		1	5	11	11	2	7	1			38
13.48 - 13.68			8	13	20	21	5	1			68
13.68 - 13.87		1	5	16	20	18	13	3			76
13.88 - 14.07			5	8	28	25	16	10	1	1	94
14.08 - 14.27				10	13	23	8	5	1	1	61
14.27 - 14.46	1		4	4	18	15	19	5		1	67
14.47 - 14.66		1	2	1	6	7	3	1		1	22
14.67 - 14.86				2	5	7	7				21
14.86 - 15.05					1	2	1				4
15.06 - 15.25						1	1				2
	1	4	34	81	131	132	85	26	2	4	500

Measurements are in Inches

Head Length (x)
Bitragion-Coronal Arc (y)

Mean: 7.772 S.D.: .268
Mean:13.914 S.D.: .452

r= .281
x= .167y + 5.448
y= .474x + 10.290

Head Length

Face Length	6.79 – 6.98	6.99 – 7.18	7.19 – 7.38	7.39 – 7.57	7.58 – 7.77	7.78 – 7.97	7.97 – 8.16	8.17 – 8.36	8.37 – 8.56	8.56 – 8.75	
4.08 – 4.15				1	2	3					6
4.15 – 4.23			1	1	7	3					12
4.23 – 4.31				2	5	3	1				11
4.31 – 4.38	1		1	9	12	7	3				33
4.39 – 4.46			6	5	11	8	5	3			38
4.47 – 4.54		1	5	15	16	21	5	3			66
4.55 – 4.62		1	7	6	11	15	12	5	1	1	59
4.63 – 4.70			6	7	13	21	13	3			63
4.71 – 4.78			4	7	13	11	9	9		1	54
4.78 – 4.86		1	3	7	9	15	12	1	1	1	50
4.86 – 4.94			2	9	13	8	6				38
4.94 – 5.01			1	6	8	8	7	1			31
5.02 – 5.09					4	5	3	1			13
5.10 – 5.17				4	1	1	3				9
5.18 – 5.25		1		1	4	3	4			1	14
5.26 – 5.33							1				1
5.34 – 5.41							1				1
5.41 – 5.49				1							1
	1	4	34	81	131	132	85	26	2	4	500

Measurements are in Inches

Head Length (x) Mean: 7.772 S.D.: .268
Face Length (y) Mean: 4.671 S.D.: .244

$r = .126$
$x = .139y + 7.129$
$y = .115x + 3.777$

Head Breadth	Head Length 6.79 - 6.98	6.99 - 7.18	7.19 - 7.38	7.38 - 7.57	7.58 - 7.77	7.78 - 7.97	7.97 - 8.16	8.17 - 8.36	8.37 - 8.56	8.56 - 8.75	
5.41 - 5.60				1	1						2
5.61 - 5.80			2	8	7	8	6	1			32
5.81 - 6.00		3	6	21	18	35	14	8	1		106
6.00 - 6.20			10	32	67	47	40	8	1	2	207
6.20 - 6.39	1		14	15	29	28	16	6			109
6.40 - 6.59		1	2	4	7	7	8	3		2	34
6.60 - 6.79					1	4	1				6
6.79 - 6.98					1	2					3
6.99 - 7.18						1					1
	1	4	34	81	131	132	85	26	2	4	500

Measurements are in Inches

Head Length (x) Mean: 7.772 S.D.: .268
Head Breadth (y) Mean: 6.118 S.D.: .213

r= .073
x= .091y + 7.215
y= .058x + 5.667

Head Length

Head Circumference	6.79 - 6.98	6.99 - 7.18	7.19 - 7.38	7.38 - 7.57	7.58 - 7.77	7.78 - 7.97	7.97 - 8.16	8.17 - 8.36	8.37 - 8.56	8.56 - 8.75	
20.97 - 21.16				1							1
21.16 - 21.35	1	1	2								4
21.36 - 21.55		2	4	10	1						17
21.56 - 21.75			7	9	3	3	1				27
21.75 - 21.94			7	12	8	2	1				31
21.95 - 22.14			9	23	20	7	1				60
22.15 - 22.34			2	9	27	17	1				56
22.34 - 22.53		1	2	8	35	23	5	1			75
22.54 - 22.73			1	4	20	27	11	1			64
22.74 - 22.93					16	25	29	1			71
22.93 - 23.12					1	12	11	4	1		29
23.13 - 23.32						9	12	8	1		30
23.33 - 23.52						5	7	4		2	18
23.52 - 23.72						1	4	6			11
23.72 - 23.91						1	2	1			4
23.92 - 24.11										2	2
	1	4	34	81	131	132	85	26	2	4	500

Measurements are in Inches

Head Length (x) Mean: 7.772 S.D.: .268
Head Circumference (y) Mean: 22.489 S.D.: .545

r= .776
x= .382y - .819
y=1.576x + 10.240

Head Length

Head Height	6.79 - 6.98	6.99 - 7.18	7.19 - 7.38	7.39 - 7.57	7.58 - 7.77	7.78 - 7.97	7.97 - 8.16	8.17 - 8.36	8.37 - 8.56	8.56 - 8.75	
4.04 - 4.23					1						1
4.23 - 4.42					1						1
4.43 - 4.62		1	5	11	7	6	5	1			36
4.63 - 4.82	1		7	17	25	18	15	1		1	85
4.82 - 5.01			15	30	48	31	26	9	1		160
5.02 - 5.21		3	4	17	34	45	18	7	1		129
5.22 - 5.41			3	5	10	23	14	5		3	63
5.41 - 5.60				1	5	7	6	1			20
5.61 - 5.80							1	2			3
5.81 - 6.00						1					1
6.00 - 6.20						1					1
	1	4	34	81	131	132	85	26	2	4	500

Measurements are in Inches

Head Length (x) Mean: 7.772 S.D.: .268
Head Height (y) Mean: 4.986 S.D.: .251

r= .257
x= .275y + 6.401
y= .240x + 3.121

Head Length

Sagittal Arc	6.77 – 6.96	6.97 – 7.16	7.17 – 7.36	7.37 – 7.57	7.57 – 7.77	7.77 – 7.97	7.97 – 8.16	8.17 – 8.36	8.37 – 8.56	8.56 – 8.75	
11.91 – 12.10			1								1
12.11 – 12.30				1							1
12.30 – 12.49			1								1
12.50 – 12.69				4	1	1	1				7
12.70 – 12.89			6	4							10
12.89 – 13.09			6	15	7	4					32
13.09 – 13.28			7	13	14	5	3				42
13.29 – 13.48	1		5	7	12	11	4				40
13.43 – 13.68		3	4	12	24	21	5	2			71
13.64 – 13.87		1	3	12	28	21	11	1			77
13.88 – 14.07			1	8	19	26	11	8	1		74
14.08 – 14.27				3	16	24	17	3			63
14.27 – 14.46				1	5	10	14	3			36
14.47 – 14.66					1	6	12	5			24
14.67 – 14.86					1	3	5	1	1	2	13
14.86 – 15.05							1	1		2	4
15.06 – 15.25								1			1
15.26 – 15.45							1	1			2
	1	4	34	81	131	132	85	26	2	4	500

Measurements are in Inches

Head Length (x)
Sagittal Arc (y)

Mean: 7.772 S.D.: .268
Mean:13.781 S.D.: .522

r= .600
x= .309y + 3.514
y=1.167x + 4.711

Arm Reach, Forward	Shoulder Breadth: 15.0 - 15.7	15.8 - 16.5	16.5 - 17.2	17.3 - 18.0	18.1 - 18.8	18.9 - 19.6	19.7 - 20.4	20.5 - 21.2	21.3 - 22.0	
30.7 - 31.4				1	1					2
31.5 - 32.2		1	1	1						3
32.3 - 33.0		1		3	2					6
33.1 - 33.8		1	4	13	3	2	1			24
33.9 - 34.6		2	11	20	14	1	1			49
34.7 - 35.4		4	7	35	23	8	2			79
35.5 - 36.2	1	1	13	42	37	20	4	1	1	120
36.3 - 37.0		1	8	27	32	21	10	1		100
37.0 - 37.7			2	14	30	7	4		1	58
37.8 - 38.5				8	17	10	5			40
38.6 - 39.3					7	2	2	1		12
39.4 - 40.1					2	4	1			7
	1	11	46	164	168	75	30	3	2	500

Measurements are in Inches

Shoulder Breadth (x) Mean: 18.268 S.D.: .875
Arm Reach, Forward (y) Mean: 36.009 S.D.: 1.465

r= .356
x= .212y + 10.634
y= .596x + 25.121

Shoulder Breadth

Arm Reach, Upward	15.1 - 15.7	15.8 - 16.5	16.5 - 17.2	17.3 - 18.0	18.1 - 18.8	18.9 - 19.6	19.7 - 20.4	20.5 - 21.2	21.3 - 22.0	
48.1 - 48.8		1	1	1						[illegible]
48.8 - 49.5			2							2
49.6 - 50.3		1	2	10	3	1				17
50.4 - 51.1		1	2	12	7	2	1			25
51.2 - 51.9		2	8	16	7	1				34
52.0 - 52.7		2	8	20	12	4	1			47
52.8 - 53.5		1	4	32	24	9	4			74
53.6 - 54.3		1	7	23	25	14				70
54.4 - 55.1	1	1	5	29	33	13	4	1		87
55.1 - 55.8		1	3	11	18	9	7			49
55.9 - 56.6			3	3	19	9	8		1	43
56.7 - 57.4			1	4	10	7	2	1	1	26
57.5 - 58.2				1	5	2	1	1		10
58.3 - 59.0				2	4	4	2			12
59.1 - 59.8					1					1
	1	11	46	164	168	75	30	3	2	500

Measurements are in Inches

Shoulder Breadth (x) Mean: 18.268 S.D.: .875
Arm Reach, Upward (y) Mean: 54.047 S.D.:2.048

r= .395
x= .169y + 9.134
y= .925x + 37.149

Shoulder Breadth

Buttock-Knee Length	15.0 - 15.7	15.8 - 16.5	16.5 - 17.2	17.3 - 18.0	18.1 - 18.8	18.9 - 19.6	19.7 - 20.4	20.5 - 21.2	21.3 - 22.0	
20.5 - 21.2				2						2
21.3 - 22.0		1	6	10	3					20
22.1 - 22.8		3	11	28	15	5	1			63
22.9 - 23.6		3	17	53	41	19	2	2		137
23.6 - 24.3		4	6	49	58	16	8			141
24.4 - 25.1	1		6	13	31	20	13		1	85
25.2 - 25.9				7	15	9	2	1	1	35
26.0 - 26.7				2	4	5	3			14
26.8 - 27.5						1	1			2
27.6 - 28.3					1					1
	1	11	46	164	168	75	30	3	2	500

Measurements are in Inches

Shoulder Breadth (x) Mean: 18.268 S.D.: .875
Buttock-Knee Length (y) Mean: 23.818 S.D.:1.082

r= .364
x= .295y + 11.242
y= .451x + 15.579

Eye Height, Sitting	Shoulder Breadth 15.0 - 15.7	15.8 - 16.5	16.5 - 17.2	17.3 - 18.0	18.1 - 18.8	18.9 - 19.6	19.7 - 20.4	20.5 - 21.2	21.3 - 22.0	
27.6 - 28.3		1		3	2	1				7
28.4 - 29.1		1	4	10	12	4				31
29.2 - 29.9		3	9	29	19	9				69
30.0 - 30.7		3	11	46	38	15	6	1		120
30.7 - 31.4	1	2	9	37	44	18	10			121
31.5 - 32.2		1	7	27	25	12	9		1	82
32.3 - 33.0			5	7	20	10	3			45
33.1 - 33.8			1	3	4	4	1	2	1	16
33.9 - 34.6				1	3	1				5
34.7 - 35.4				1	1	1				3
35.5 - 36.2							1			1
	1	11	46	164	168	75	30	3	2	500

Measurements are in Inches

Shoulder Breadth (x) Mean: 18.268 S.D.: .875
Eye Height, Sitting (y) Mean: 30.904 S.D.:1.281

r= .245
x= .167y + 13.107
y= .358x + 24.364

Leg Length, Sitting	Shoulder Breadth 15.0 - 15.7	15.8 - 16.5	16.5 - 17.2	17.3 - 18.0	18.1 - 18.8	18.9 - 19.6	19.7 - 20.4	20.5 - 21.2	21.3 - 22.0	
39.4 - 40.1				1						1
40.2 - 40.9		1	2	1		1				5
41.0 - 41.7			2	3	1	1				7
41.8 - 42.5		1	2	13	4	3				23
42.5 - 43.2		3	7	19	10	4	1			44
43.3 - 44.0	1	1	9	26	22	7	2			68
44.1 - 44.8		2	11	34	38	9	3	1		98
44.9 - 45.6		1	2	30	32	13	5	1		84
45.7 - 46.4		1	8	17	26	19	7			78
46.5 - 47.2		1	2	11	23	5	5		2	49
47.3 - 48.0			1	9	9	10	5	1		35
48.1 - 48.8					3	3	2			8
	1	11	46	164	168	75	30	3	2	500

Measurements are in Inches

Shoulder Breadth (x) Mean: 18.268 S.D.: .875
Leg Length, Sitting (y) Mean: 44.923 S.D.: 1.635

$r = .317$
$x = .170y + 10.631$
$y = .593x + 34.090$

Seat Width, Sitting	Shoulder Breadth									
	15.0 - 15.7	15.8 - 16.5	16.5 - 17.2	17.3 - 18.0	18.1 - 18.8	18.9 - 19.6	19.7 - 20.4	20.5 - 21.2	21.3 - 22.0	
11.81 - 12.20				2						2
12.21 - 12.59		3	2	3						8
12.60 - 12.98		1	8	13	2					24
12.99 - 13.38		6	11	29	11	5				62
13.39 - 13.77		1	9	28	29	9	1	1		78
13.78 - 14.16	1		8	25	37	7	1			79
14.17 - 14.56			5	28	37	13	4		1	88
14.57 - 14.95			2	15	27	17	5			66
14.96 - 15.34				11	17	5	6			39
15.35 - 15.74			1	4	6	10	10	2	1	34
15.75 - 16.13				3	2	3	2			12
16.14 - 16.53				1		4	1			6
16.54 - 16.92						1				1
16.93 - 17.31						1				1
	1	11	46	164	168	75	30	3	2	500

Measurements are in Inches

Shoulder Breadth (x) Mean: 18.268 S.D.: .875
Seat Width, Sitting (y) Mean: 14.187 S.D.: .872

r= .483
x= .485y + 11.387
y= .481x + 5.100

Sitting Height \ Shoulder Breadth	15.0 - 15.7	15.8 - 16.5	16.5 - 17.2	17.3 - 18.0	18.1 - 18.8	18.9 - 19.6	19.7 - 20.4	20.5 - 21.2	21.3 - 22.0	
31.5 - 32.2		1	1		1					3
32.3 - 33.0			1	4	1	2				8
33.1 - 33.8		2	3	12	5	3	1			26
33.9 - 34.6		4	10	34	18	5	1			72
34.7 - 35.4		2	12	41	42	14	2	1		114
35.5 - 36.2		1	11	36	44	21	12		1	126
36.3 - 37.0	1		5	20	31	15	8		1	81
37.0 - 37.7		1	2	14	16	9	5	1		48
37.8 - 38.5			1	2	6	5	1	1		16
38.6 - 39.3				1	4					5
39.4 - 40.1						1				1
	1	11	46	164	168	75	30	3	2	500

Measurements are in Inches

Shoulder Breadth (x) Mean: 18.268 S.D.: .875
Sitting Height (y) Mean: 35.608 S.D.: 1.271

r= .272
x= .187y + 11.609
y= .395x + 28.392

Sitting Height

Arm Reach	31.5 - 32.2	32.3 - 33.0	33.1 - 33.8	33.9 - 34.6	34.7 - 35.4	35.5 - 36.2	36.3 - 37.0	37.0 - 37.7	37.8 - 38.5	38.6 - 39.3	39.4 - 40.1	
30.7 - 31.4				1	1							4
31.5 32.2			1		2							3
32.3 - 33.0			1		2	3						6
33.1 - 33.8		1	1	12	4	4		1	1			24
33.9 - 34.6	1	2	4	14	12	9	5	1	1			49
34.7 - 35.4		1	6	18	20	18	10	6				79
35.5 - 36.2		2	7	10	32	35	23	9	2			120
36.3 - 37.0	2	2	4	6	22	26	17	17	1	3		100
37.0 - 37.7			1	8	11	16	13	3	5	1		58
37.8 - 38.5			1	1	6	9	9	7	5	1	1	40
38.6 - 39.3				2	2	3	1	3	1			12
39.4 - 40.1						3	3	1				7
	3	8	26	72	114	126	81	48	16	5	1	500

Measurements are in Inches

Sitting Height (x) — Mean: 35.608 — S.D.: 1.27[illegible]
Arm Reach, Forward (y) — Mean: 36.009 — S.D.: 1.[illegible]35

r= .327
x= .283y + 25.4[illegible]
y= .377x + 22.585

Sitting Height

Arm Reach, Upward	31.5 - 32.2	32.3 - 33.0	33.1 - 33.8	33.9 - 34.6	34.7 - 35.4	35.5 - 36.2	36.3 - 37.0	37.0 - 37.7	37.8 - 38.5	38.6 - 39.3	39.4 - 40.1	
48.1 - 48.8			2	1								3
48.8 - 49.5				1		1						2
49.6 - 50.3	1	2	1	7	5		1					17
50.4 - 51.1		4	9	4	6	1		1				25
51.2 - 51.9		1	4	14	9	4	1	1				34
52.0 - 52.7		1	5	14	17	9	1					47
52.8 - 53.5	1		1	11	21	30	9		1			74
53.6 - 54.3	1		2	12	19	16	13	7				70
54.4 - 55.1			2	5	23	28	21	8				87
55.1 - 55.8				2	9	19	11	6	2			49
55.9 - 56.6				1	4	10	12	10	6			43
56.7 - 57.4					1	4	8	10	2	1		26
57.5 - 58.2						3	2	2	2		1	10
58.3 - 59.0						1	1	3	3	4		12
59.1 - 59.8							1					1
	3	8	26	72	114	126	81	48	16	5	1	500

Measurements are in Inches

Sitting Height (x) Mean: 35.608 S.D.: 1.271
Arm Reach, Upward (y) Mean: 54.047 S.D.: 2.048

r= .641
x= .398y + 14.097
y=1.032x + 17.300

Sitting Height

Buttock-Knee Length	31.5 - 32.2	32.3 - 33.0	33.1 - 33.8	33.9 - 34.6	34.7 - 35.4	35.5 - 36.2	36.3 - 3[illegible].0	37.0 - 37.[illegible]	37.8 - 38.5	38.6 - 39.3
20.5 - 21.2			1	1						
21.3 - 22.0			1	8	7	3	1			
22.1 - 22.8		1	6	18	21	11	3	3		
22.9 - 23.6	2	6	12	21	26	[illegible]	16	8	1	
23.6 - 24.3		1	5	14	34		28	13	4	
24.4 - 25.1	1			6	20	18	20	12	7	1
25.2 - 25.9				3	5	9	7	5	3	3
26.0 - 26.7			1	1	1	3	5	2		1
26.8 - 27.5						1	1			
27.6 - 28.3									1	
	3	8	26	72	11[illegible]	126	81	45	16	5

Measurements are in Inches

Sitting Height (x) Mean: 35.608 S.D.: 1.271

Buttock-Knee Length (y) Mean: 23.818 S.D.: 1.082

[illegible] .354

[illegible] .4[illegible]y + 25.414

[illegible]x + [illegible].780

Sitting Height

Eye Height, Sitting	31.5 - 32.2	32.3 - 33.0	33.1 - 33.8	33.9 - 34.6	34.7 - 35.4	35.5 - 36.2	36.3 - 37.0	37.0 - 37.7	37.8 - 38.5	38.6 - 39.3	39.4 - 40.1	
27.6 - 28.3	1	1	3	1		1						7
28.4 - 29.1		6	12	12	1							31
29.2 - 29.9		1	8	35	22	3						69
30.0 - 30.7	1		3	22	57	28	9					120
30.7 - 31.4	1			2	32	58	26	2				121
31.5 - 32.2					1	29	30	19	2	1		82
32.3 - 33.0						6	12	20	7			45
33.1 - 33.8							4	4	6	2		16
33.9 - 34.6					1	1		1	1	1		5
34.7 - 35.4								1		1	1	3
35.5 - 36.2								1				1
	3	8	26	72	114	126	81	48	16	5	1	500

Measurements are in Inches

Sitting Height (x) Mean: 35.608 S.D.: 1.271
Eye Height, Sitting (y) Mean: 30.904 S.D.: 1.281

r= .828
x= .821y + 10.236
y= .835x + 1.171

Sitting Height

Forearm-Hand Length	31.5 - 32.2	32.3 - 33.0	33.1 - 33.8	33.9 - 34.6	34.7 - 35.4	35.5 - 36.2	36.3 - 37.0	37.0 - 37.7	37.8 - 38.5	38.6 - 39.3	39.4 - 40.1	
14.2 - 14.9					1	1						2
15.0 - 15.7						1						1
15.8 - 16.5					2		1	1				4
16.5 - 17.2					1	1						2
17.3 - 18.0	1	1	7	17	8	2	3	1				40
18.1 - 18.8		6	13	32	43	44	18	7				163
18.9 - 19.6	1	1	4	19	39	55	35	24	13		1	192
19.7 - 20.4	1		2	3	17	17	17	13	2	4		76
20.5 - 21.2				1	2	3	5		1	1		13
21.3 - 22.0					1	2	2	2				7
	3	8	26	72	114	126	81	48	16	5	1	500

Measurements are in Inches

Sitting Height (x) Mean: 35.608 S.D.: 1.271
Forearm-Hand Length (y) Mean: 19.033 S.D.: .860

r= .329
x= .486y + 26.358
y= .223x + 11.092

Sitting Height

Leg Length, Sitting	31.5 - 32.2	32.3 - 33.0	33.1 - 33.8	33.9 - 34.6	34.7 - 35.4	35.5 - 36.2	36.3 - 37.0	37.0 - 37.7	37.8 - 38.5	38.6 - 39.3	39.4 - 40.1	
39.1 - 40.1					1							1
40.2 - 40.9			1	2		2						5
41.0 - 41.7			1	2	3	1						7
41.8 - 42.5		1	4	6	8	2	2					23
42.5 - 43.2	1		7	11	14	10	2	2				44
43.3 - 44.0	1		4	15	19	16	9	4				68
44.1 - 44.8		5	3	17	26	23	15	7	2			98
44.9 - 45.6		1	4	7	15	25	17	10	3	1	1	84
45.7 - 46.4	1	1	1	6	15	20	11	9	3	1		78
46.5 - 47.2				3	10	10	14	7	5			49
47.3 - 48.0			1	3	2	8	7	8	3	3		35
48.1 - 48.8						3	4	1				8
	3	8	28	72	114	120	81	48	16	5	1	500

Measurements are in Inches

Sitting Height (x) Mean: 35.608 S.D.: 1.271

Leg Length, Sitting (y) Mean: 44.923 S.D.: 1.635

r= .392

x= .305y + 21.906

y= .504x + 26.977

Sitting Height

Seat Width, Sitting	31.5 - 32.2	32.3 - 33.0	33.1 - 33.8	33.9 - 34.6	34.7 - 35.4	35.5 - 36.2	36.3 - 37.0	37.0 - 37.7	37.8 - 38.5	38.6 - 39.3	39.4 - 40.1	
11.81 - 12.20						1		1				2
12.21 - 12.59			1	2	3	2						8
12.60 - 12.98	2		3	10	2	4	2	1				24
12.99 - 13.38	1	2	4	18	17	14	2	3	1			62
13.39 - 13.77		3	4	16	23	17	8	6	1			78
13.78 - 14.16		2	1	11	24	17	18	4	1	1		79
14.17 - 14.56			6	9	17	27	18	7	1	1		88
14.57 - 14.95		1	2	4	15	18	12	11	3			66
14.96 - 15.34			3	1	8	9	9	5	2	1	1	39
15.35 - 15.74					4	14	7	5	2	2		34
15.75 - 16.13				1	1	2	2	3	3			12
16.14 - 16.53						1	2	1	2			6
16.54 - 16.92							1					1
16.93 - 17.31								1				1
	3	8	26	72	114	126	81	45	16	5	1	500

Measurements are in Inches

Sitting Height (x) Mean: 35.608 S.D.: 1.271
Seat Width, Sitting (y) Mean: 14.187 S.D.: .872

r= .392
x= .571y + 27.507
y= .269x + 4.608

Sitting Height

Shoulder-Elbow Length	31.5 - 32.2	32.3 - 33.0	33.1 - 33.8	33.9 - 34.6	34.7 - 35.4	35.5 - 36.2	36.3 - 37.0	37.0 - 37.7	37.8 - 38.5	38.6 - 39.3	39.4 - 40.1	
12.21 - 12.59					1							1
12.60 - 12.98				1								1
12.99 - 13.38			1	1								2
13.39 - 13.77			1	4	5	3						13
13.78 - 14.16			7	14	14	4	4	2				43
14.17 - 14.56		4	6	15	18	23	8	7				81
14.57 - 14.95	2	4	7	14	21	30	16	3	1			98
14.96 - 15.34	1			15	23	30	21	14	7			109
15.35 - 15.74			3	6	18	15	20	12	2	1	1	81
15.75 - 16.13			1	2	11	13	8	7	4	3		49
16.14 - 16.53				2	5	4	3		2	1		17
16.54 - 16.92						1		2				3
16.93 - 17.31							1	1				2
	3	8	26	72	114	126	81	48	16	5	1	500

Measurements are in Inches

Sitting Height (x) Mean: 35.608 S.D.: 1.271
Shoulder-Elbow Length (y) Mean: 14.991 S.D.: .702

r= .355
x= .643y + 25.969
y= .196x + 8.012

Arm Reach, Forward

Stature

	62.7 - 63.4	63.5 - 64.2	64.3 - 65.0	65.0 - 65.7	65.8 - 66.5	66.6 - 67.3	67.4 - 68.1	68.2 - 68.9	68.9 - 69.6	69.7 - 70.4	70.5 - 71.2	71.3 - 72.0	72.1 - 72.8	72.9 - 73.6	73.7 - 74.4	74.5 - 75.2	75.3 - 76.0	
30.7 - 31.4						1		1										2
31.5 - 32.2	1					2												3
32.3 - 33.0			1				1	1		2		1						6
33.1 - 33.8		2	1	5	3	2	2	3		1	1		1	2	1			24
33.9 - 34.6		1		2	5	11	6	9	7	1	1	2	3	1				49
34.7 - 35.4			1	3	4	13	14	11	17	8	5	2	1					79
35.5 - 36.2				5	4	7	12	22	19	22	18	6	5					120
36.3 - 37.0				1	3	6	9	9	19	15	11	13	8	2	2	2		100
37.0 - 37.7					1	5	4	7	7	5	10	5	9	2	2	1		58
37.8 - 38.5								1	3	5	1	12	7	6	4	1		40
38.6 - 39.3									1	4	1	2	1	1	1	1		12
39.4 - 40.1													2			4	1	7
	1	3	3	16	20	47	48	64	73	63	48	43	37	14	10	9	1	500

Measurements are in Inches

Stature (x) — Mean: 69.497 — S.D.: 2.251

Arm Reach, Forward (y) — Mean: 36.009 — S.D.: 1.465

$r = .528$

$x = .812y + 40.258$

$y = .344x + 12.122$

Stature

Arm Reach, Upward	62.7 - 63.4	63.5 - 64.2	64.3 - 65.0	65.0 - 65.7	65.8 - 66.5	66.6 - 67.3	67.4 - 68.1	68.1 - 68.8	68.9 - 69.6	69.7 - 70.4	70.5 - 71.2	71.3 - 72.0	72.1 - 72.8	72.9 - 73.6	73.7 - 74.4	74.5 - 75.2	75.3 - 76.0	
48.1 - 48.8		1		1	1													3
48-8 - 49.5		1		1														2
49.6 - 50.3	1	1	2	1	1	6	1	1			1	1		1				17
50.4 - 51.1			1	7	4	4	2	3	1		1			2				25
51.2 - 51.9				4	5	11	5	6	1	1			1					34
52.0 - 52.7					3	15	13	8	5	3								47
52.8 - 53.5					5	3	13	17	15	17	3	1						74
53.6 - 54.3				1	1	5	6	13	18	9	10	3	3		1			70
54.4 - 55.1						2	6	12	18	12	15	13	6	2	1			87
55.1 - 55.8						1	2	3	9	10	5	9	5	3	2			49
55.9 - 56.6				1				1	4	5	6	11	12	2		1		43
56.7 - 57.4									2	4	4	1	7	3	1	4		26
57.5 - 58.2											2	3	2		1	2		10
58.3 - 59.0										2	1	1		1	4	2	1	12
59.1 - 59.8													1					1
	1	3	3	16	20	47	48	64	73	63	48	43	37	14	10	9	1	50?

Measurements are in Inches

Stature (x) Mean: 69.497 S.D.: 2.251
Arm Reach, Upward (y) Mean: 54.047 S.D.: 2.048

r= .716
x= .786y + 27.016
y= .651x + 8.804

Back Waist Length

Stature

Back Waist Length	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	66.5 - 67.2	[illegible]	[illegible]	[illegible]	[illegible]	70.5 - 71.2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
14.2 - 14.9						1	1		2	1	1			1				7
15.0 - 15.7		1				1		1	1			2		1				7
15.8 - 16.5			2	4	2	5	1	1	3		1	2	1	1				23
16.5 - 17.2	1	1	1	4	8	11	12	10	7	9	2	1	4					71
17.3 - 18.0				3	5	11	12	26	24	19	11	8	7	2	1			129
18.1 - 18.8		1		3	2	14	18	17	21	18	11	10	5	4	2	1		127
18.9 - 19.6				2	3	3	3	8	11	11	14	13	17	4	3	4	1	97
19.7 - 20.4						1	1	1	3	4	7	7	2		3	2		31
20.5 - 21.2										1	1			1	1	1		5
21.3 - 22.0									1				1			1		3
	1	3	3	16	20	47	48	64	73	63	48	43	37	14	10	9	1	500

Measurements are in Inches

Stature (x) Mean: 69.497 S.D.: 2.251
Back Waist Length (y) Mean: 18.172 S.D.: 1.170

r= .381
x= .732y + 56.195
y= .198x + 4.412

Stature

Buttock-Knee Length	63.7 – 63.4	63.5 – 64.2	64.3 – 65.0	65.1 – 65.7	65.8 – 66.5	66.6 – 67.3	67.4 – 68.1	68.2 – 68.9	68.9 – 69.6	69.7 – 70.4	70.5 – 71.2	71.3 – 72.0	72.1 – 72.8	72.9 – 73.6	73.7 – 74.4	74.5 – 75.2	75.3 – 76.0	
20.5 – 21.2												1	1					2
21.3 – 22.0	1	2		5	2	4	2	2	1					1				20
22.1 – 22.8		1	3	4	5	15	10	14	3	1			1		1	1	1	63
22.9 – 23.6				7	10	20	24	24	29	15	4	2		2				137
23.6 – 24.3					2	4	12	22	25	30	21	11	9	4	1			141
24.4 – 25.1						1		2	13	13	18	17	13	6	1	1		85
25.2 – 25.9					1				1	3	5	10	9	1	2	3		35
26.0 – 26.7									1	1		2	3		5	2		14
26.8 – 27.5																2		2
27.6 – 28.3													1					1
	1	3	3	16	20	47	48	64	73	63	48	43	37	14	10	9	1	500

Measurements are in Inches

Stature (x) Mean: 69.497 S.D.: 2.251
Buttock-Knee Length (y) Mean: 23.818 S.D.: 1.082

r= .6 2
x= 1.376y + 36.723
y= .316x + 1.718

Chest Circumference

	62.7 - 63.4	63.5 - 64.2	64.3 - 65.0	65.0 - 65.7	65.8 - 66.5	66.6 - 67.2	67.4 - 68.1	68.1 - 68.9	68.9 - 69.6	69.7 - 70.4	70.5 - 71.2	71.3 - 72.0	72.1 - 72.8	72.9 - 73.6	73.7 - 74.4	74.5 - 75.2	75.3 - 76.0	
32.3 - 33.0				1			1					1						3
33.1 - 33.8		1		1		2		1	1	1								7
33.9 - 34.6				1	1	6	3	5	1	3	2	3	1	1				27
34.7 - 35.4					1	5	2	9	9	4	1	1	1	1		1		35
35.5 - 36.2	1	2	1	1	2	7	8	9	9	1	4	7	2	1		1		56
36.3 - 37.0			1	2	3	7	6	9	7	9	4	5	2	1	1	2		59
37.0 - 37.7				3	4	4	4	12	10	12	9	1	7	2	1			69
37.8 - 38.5			1		2	6	15	7	13	5	7	6	5	4	1	1		73
38.6 - 39.3				3	3	6	4	4	7	8	6	9	2	1	2	3		57
39.4 - 40.1				1	2	2	4	4	10	6	5	4	10		2			50
40.2 - 40.9				2	2	1	1	2	3	7	3	4	3	1	3	1		33
41.0 - 41.7						1	1		1	5	3	1	3	2			1	18
41.8 - 42.5				1				1	1	1	1	1	1					7
42.5 - 43.2								1	1	1	3							6
	1	3	3	16	20	47	48	64	73	63	48	43	37	14	10	9	1	500

Measurements are in Inches

Stature (x) Mean: 69.497 S.D.: 2.251
Chest Circumference (y) Mean: 37.717 S.D.: 2.066

r= .233
x= .253y + 59.955
y= .213x + 22.914

Stature

Chest Depth	62.7 - 63.4	63.5 - 64.2	64.3 - 65.0	65.0 - 65.7	65.8 - 66.5	66.6 - 67.3	67.4 - 68.1	68.1 - 68.8	68.9 - 69.6	69.7 - 70.4	70.5 - 71.2	71.3 - 72.0	72.1 - 72.8	72.9 - 73.6	73.7 - 74.4	74.5 - 75.2	75.3 - 76.0	
6.69 - 7.08						1												1
7.09 - 7.47				1			1	2	1									5
7.48 - 7.86						2	2	8	3	2		2						19
7.87 - 8.26		1	1	2	4	6	7	8	9	3	6	8	2			3		60
8.27 - 8.65	1	1		1	3	11	8	10	16	11	8	8	6	2	2	1		89
8.66 - 9.05		1	2	1	6	12	11	12	19	15	6	8	6	4	1	1		107
9.06 - 9.44				7	4	8	6	12	11	11	11	8	8	4	3	1		94
9.45 - 9.83				2	1	2	6	4	5	6	2	6	7	3		2		46
9.84 - 10.23				2	2	2	4	4	4	4	9	2	4	1	3	1		42
10.24 - 10.62						3	3	3	4	8	2		2					25
10.63 - 11.01								1		3	1		2					7
11.02 - 11.41											1						1	2
11.42 - 11.80									1						1			2
11.81 - 12.20												1						1
12.21 - 12.59																		
	1	3	3	16	20	47	48	64	73	63	48	43	37	14	10	9	1	500

Measurements are in Inches

Stature (x)
Chest Depth (y)

Mean: 69.497 S.D.: 2.251
Mean: 9.309 S.D.: .790

r= .173
x= .494y +55.047
y= .061x + 4.770

Crotch Height (Inseam)

	62.7 - 63.4	63.5 - 64.2	64.3 - 65.0	65.0 - 65.7	65.8 - 66.5	66.6 - 67.3	67.4 - 68.1	68.1 - 68.8	68.9 - 69.6	69.7 - 70.4	70.5 - 71.2	71.3 - 72.0	72.1 - 72.8	72.9 - 73.6	73.7 - 74.4	74.5 - 75.2	75.3 - 76.0	
26.0 - 26.7	1																	1
26.8 - 27.5					2													2
27.6 - 28.3		2		1	1							1	1					6
28.4 - 29.1			3	3	5	4	5		1									21
29.2 - 29.9		1		6	5	7	5	5	1	2	1			1	1			35
30.0 - 30.7				5	4	21	10	13	10	4	1		1					69
30.7 - 31.4					3	11	16	24	25	13	7	1	1	1				102
31.5 - 32.2						2	8	11	17	22	10	8	4	3				85
32.3 - 33.0				1		2	4	11	11	15	17	9	12	1				83
33.1 - 33.8									7	6	8	14	12	1	3	2		53
33.9 - 34.6									1	1	2	6	2	2	4	1		19
34.7 - 35.4											1	3	2	5	1	2		14
35.5 - 36.2											1	1	2		1	4		9
36.3 - 37.0																	1	1
	1	3	3	16	20	47	48	64	73	63	48	43	37	14	10	9	1	500

Measurements are in Inches

Stature (x) — Mean: 69.497 — S.D.: 2.251
Crotch Height (y) — Mean: 31.689 — S.D.: 1.643

r= .744
x= 1.019y + 37.206
y= .543x - 6.045

Stature

Eye Height, Sitting	62.7 - 63.4	63.5 - 64.2	64.3 - 65.0	65.0 - 65.7	65.8 - 66.5	66.6 - 67.3	67.4 - 68.1	68.1 - 68.8	68.9 - 69.6	69.7 - 70.4	70.5 - 71.2	71.3 - 72.0	72.1 - 72.8	72.9 - 73.6	73.7 - 74.4	74.5 - 75.2	75.3 - 76.0	
27.6 - 28.3				1		2	1				1	1		1				7
28.4 - 29.1		1		3	8	6	4	4	3	1				1				31
29.2 - 29.9		1	1	4	8	12	11	11	8	2	4	4	1	1	1			69
30.0 - 30.7	1	1	2	7	4	21	15	18	21	13	8	5	4					120
30.7 - 31.4						4	13	19	21	26	16	8	8	1	2	3		121
31.5 - 32.2				1		1	2	9	17	12	6	14	8	7	2	2	1	82
32.3 - 33.0						1		2	2	7	9	9	8	2	3	2		45
33.1 - 33.8							1	1	1	1	3		6		2	1		16
33.9 - 34.6							1					1	1	1		1		5
34.7 - 35.4										1		1	1					3
35.5 - 36.2											1							1
	1	3	3	16	20	47	48	64	73	63	48	43	37	14	10	9	1	500

Measurements are in Inches

Stature (x) Mean: 69.497 S.D.: 2.251
Eye Height, Sitting (y) Mean: 30.904 S.D.: 1.241

r= .541
x= .951y + 40.107
y= .308x + 9.499

Stature

Foot Length	62.7 - 63.4	63.5 - 64.2	64.3 - 65.0	65.0 - 65.7	65.8 - 66.5	66.6 - 67.3	67.4 - 68.1	68.1 - 68.8	68.9 - 69.6	69.7 - 70.4	70.5 - 71.2	71.3 - 72.0	72.1 - 72.8	72.9 - 73.6	73.7 - 74.4	74.5 - 75.2	75.3 - 76.0	
8.56 - 8.75										1								1
8.76 - 8.95																		
8.96 - 9.15							1											1
9.16 - 9.35				1														1
9.35 - 9.54		1				1			1									3
9.55 - 9.74	1		1	1	1		1	1				1						-
9.75 - 9.94		2		4	1	1	2	3	3									16
9.94 - 10.13			1	1	2	9	8	4	3	3	3	1	1	1				37
10.14 - 10.33				5	6	12	8	6	10	1	5	2	1	1	1			58
10.34 - 10.53			1	1	5	12	10	15	13	11	3	3		1				75
10.54 - 10.73				1	4	7	3	19	17	18	4	8	3		1			85
10.73 - 10.92					1	1	7	9	12	16	12	5	5	3		2		73
10.93 - 11.12				2			7	5	5	8	9	5	7	2	2			52
11.13 - 11.32						3	1	2	8	5	5	12	11	2	4			53
11.33 - 11.51						1			1		5	3	5	2	1	1		19
11.52 - 11.71											2	1	2	1		2	1	9
11.72 - 11.91												2	[illegible]	1		1		5
11.91 - 12.10													1		1	1		3
12.11 - 12.30																2		2
	1	3	3	16	20	47	48	64	73	63	48	43	37	[illegible]	10	9	1	500

Measurements are in Inches

Stature (x)
Foot Length (y)

Mean: 69.497 S.D.: 2.251
Mean: 10.663 S.D.: .488

r= .589
x= 2.714y + 40.558
y= .128x + 1.767

Stature

Forearm-Hand Length	62.7 - 63.4	63.5 - 64.2	64.3 - 65.0	65.1 - 65.7	65.8 - 66.5	66.6 - 67.3	67.4 - 68.1	68.2 - 68.9	69.0 - 69.8	69.9 - 70.4	70.5 - 71.2	71.3 - 72.0	72.1 - 72.9	73.0 - 73.6	73.7 - 74.4	74.5 - 75.2	75.3 - 76.1	
14.2 - 14.9						1					1							2
15.0 - 15.7								1										1
15.8 - 16.5							1			1		1	1					4
16.5 - 17.2	1															1		2
17.3 - 18.0		3	2	7	3	11	5	3	1		1	1	2	1				40
18.1 - 18.8			1	7	15	25	29	31	28	16	7	1		2	1			163
18.9 - 19.6				2	2	9	12	28	35	36	28	18	17	3	1	1		192
19.7 - 20.4						1	1	1	8	8	10	20	11	7	4	5		76
20.5 - 21.2									1	1		2	4	1	3	1		13
21.3 - 22.0										1	1		2		1	1	1	7
	1	3	3	16	20	47	48	64	73	63	48	43	37	14	10	9	1	500

Measurements are in Inches

Stature (x) Mean: 69.497 S.D.: 2.251
Forearm-Hand Length (y) Mean: 19.033 S.D.: .860

$r = .562$
$x = 1.471y + 41.499$
$y = .215x + 4.091$

T6

Stature

Hand Length	62.7 - 63.4	63.5 - 64.2	64.3 - 65.0	65.0 - 65.7	65.8 - 66.5	66.6 - 67.3	67.4 - 68.1	68.1 - 68.8	68.9 - 69.6	69.7 - 70.4	70.5 - 71.2	71.3 - 72.0	72.1 - 72.8	72.9 - 73.6	73.7 - 74.4	74.5 - 75.2	75.3 - 76.0	
6.40 - 6.59		1						1										2
6.60 - 6.79			1	2		3		1			1	1						9
6.79 - 6.98	1		1	3	5	6	5	3	3	2			1	1				31
6.99 - 7.18		1	1	3	4	7	11	13	9	4	5		1					59
7.19 - 7.38				4	2	16	8	15	19	18	10	5	1	2				100
7.38 - 7.57		1		2	6	10	17	21	14	18	15	5	5	2	2	1		119
7.58 - 7.77				2	3	2	6	6	14	11	8	15	16	1	1	1		86
7.78 - 7.97						3		3	8	6	5	12	6	6	1	3		53
7.97 - 8.16							1	1	6	4	1	4	6	2	5	2		32
8.17 - 8.36											2		1		1	1		5
8.37 - 8.56											1	1				1	1	4
	1	3	3	16	20	47	48	64	73	63	48	43	37	14	10	9	1	500

Measurements are in Inches

Stature (x)
Hand Length (y)

Mean: 69.497 S.D.: 2.251
Mean: 7.471 S.D.: .344

r= .543
x= 3.545y + 43.012
y= .083x + 1.703

Stature

Kneecap Height	62.7 - 63.4	63.5 - 64.2	64.3 - 65.0	65.0 - 65.7	65.8 - 66.5	66.6 - 67.3	67.4 - 68.1	68.1 - 68.8	68.9 - 69.6	69.7 - 70.4	70.5 - 71.2	71.3 - 72.0	72.1 - 72.8	72.9 - 73.6	73.7 - 74.4	74.5 - 75.2	75.3 - 76.0	
16.5 - 17.2				1						1								2
17.3 - 18.0					2				1		1	1						5
18.1 - 18.8		2	1	2	2	3	1	1	1				2		1			16
18.9 - 19.6	1	1	1	5	4	11	5	3	3	1			1	2	1			39
19.7 - 20.4				6	9	21	24	27	17	9	1	2						116
20.5 - 21.2			1	1	3	9	13	27	26	29	23	9	5	2				148
21.3 - 22.0				1		2	5	4	20	19	13	17	15	1	2	3		102
22.1 - 22.8						1		1	5	2	9	10	13	6	4	1		52
22.9 - 23.6								1		2	1	4	1	2	2	4	1	18
23.6 - 24.3														1		1		2
	1	3	3	16	20	47	48	64	73	63	48	43	37	14	10	9	1	500

Measurements are in Inches

Stature (x) Mean: 69.497 S.D.: 2.251
Kneecap Height (y) Mean: 20.850 S.D.: 1.119

r= .628
x= 1.264y + 4[illegible].143
y= .312x - .833

Stature

Leg Length, Sitting	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible] - [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	1																	1
[illegible]		1		1	1					1		1						5
[illegible]		1	1		2	1	1							1				7
[illegible]			1	3	4	6	4	2					1	1	1			23
[illegible]		1		3	4	12	6	6	7	1	2		1	1				44
43.3 - [illegible]				4	3	15	14	16	11	3	1	1						68
[illegible]				2	5	7	15	18	17	21	6	2	1	2				98
[illegible]			1	1	1	3	4	11	20	15	13	11	3			1		84
45.7 - [illegible]				2		1	3	8	12	14	17	8	11	2				78
[illegible]						2	1	3	5	6	4	13	7	6	1	1		49
47.3 - [illegible]									1	2	3	7	12	1	7	2		35
[illegible]													1		1	5	1	8
	1	3	3	16	20	47	48	64	73	63	46	43	37	14	10	9	1	500

Measurements are in Inches

Stature (x)	Mean: 69.497	S.D.: 2.251	$r = .654$ $x = .901y + 29.021$
Leg Length, Sitting (y)	Mean: 44.923	S.D.: 1.635	$y = .475x + 11.912$

Stature

Neck Circumference	62.7 - 63.4	63.5 - 64.2	64.3 - 65.0	65.0 - 65.7	65.8 - 66.5	66.6 - 67.3	67.4 - 68.1	68.1 - 68.8	68.9 - 69.6	69.7 - 70.4	70.5 - 71.2	71.3 - 72.0	72.1 - 72.8	72.9 - 73.6	73.7 - 74.4	74.5 - 75.2	75.3 - 76.0	
12.60 - 12.98										1		1						2
12.99 - 13.38							1		1									2
13.39 - 13.77				4	2	3	3	4	1	1		1	1	1				21
13.78 - 14.16		1				6	5	2	6	3		3	1	1				28
14.17 - 14.56		1			5	10	3	9	9	7	6	7	2		2			61
14.57 - 14.95			2	2	3	12	7	12	17	9	9	9	6	5	2			95
14.96 - 15.34		1	1	5	3	6	11	14	12	16	9	10	7	1	1	2		99
15.35 - 15.74				3	2	5	11	13	14	11	12	4	8	1	3	4	1	92
15.75 - 16.13	1			2	3	4	5	6	9	12	5	6	6	2	1	3		65
16.14 - 16.53					2	1		2	2	3	3	1	5	2	1			22
16.54 - 16.92							2	2			3	1	1					9
16.93 - 17.31									2					1				3
17.32 - 17.71											1							1
	1	3	3	16	20	47	48	64	73	63	48	43	37	14	10	9	1	500

Measurements are in Inches

Stature (x) Mean: 69.497 S.D.: 2.251
Neck Circumference (y) Mean: 15.109 S.D.: .757

r= .185
x= .549y + 61.202
y= .062x + 10.800

Stature

Seat Circumference	62.7 - 63.4	63.5 - 64.2	64.3 - 65.0	65.0 - 65.7	65.8 - 66.5	66.6 - 67.3	67.4 - 68.1	68.1 - 68.8	68.9 - 69.6	69.7 - 70.4	70.5 - 71.2	71.3 - 72.0	72.1 - 72.8	72.9 - 73.6	73.7 - 74.4	74.5 - 75.2	75.3 - 76.0	
31.5 - 32.2								1										1
32.3 - 33.0				1														1
33.1 - 33.8				2			2	2	4									10
33.9 - 34.6		1				1	2	1	1			1						7
34.7 - 35.4				1	1	5	1	2	6	1		1	2	2				22
35.5 - 36.2		1	1	3	4	9	8	10	4	5	2	2	1					50
36.3 - 37.0	1		1		2	6	5	5	6	3	4	5	1			1		40
37.0 - 37.7				5	5	12	5	10	14	12	5	8	2	2	1	1		82
37.8 - 38.5		1		2	3	3	7	9	12	9	8	5	8	2	1			70
38.6 - 39.3					1	7	9	14	11	8	10	8	4	4	2	4	1	83
39.4 - 40.1					2	3	5	3	10	10	11	7	6	1	2			60
40.2 - 40.9				1	2	1	1	3	2	6	4	3	6	2	1	1		33
41.0 - 41.7			1	1				2	3	4	2	2	4		2	1		22
41.8 - 42.5							1	1		2						1		5
42.5 - 43.2							1	1		2			1		1			6
43.3 - 44.0							1			1		1	2					5
44.1 - 44.8											1			1				2
44.9 - 45.6											1							1
	1	3	3	.6	20	47	48	64	73	63	48	43	37	14	10	9	1	500

Measurements are in Inches

Stature (x) Mean: 69.497 S.D.: 2.251

Seat Circumference (y) Mean: 38.179 S.D.: 2.056

r= .330

x= .361y + 55.714

y= .301x + 17.260

Stature

Seat Width, Sitting	62.7 - 63.4	63.5 - 64.2	64.3 - 65.0	65.0 - 65.7	65.8 - 66.5	66.6 - 67.3	67.4 - 68.1	68.1 - 68.8	68.9 - 69.6	69.7 - 70.4	70.5 - 71.2	71.3 - 72.0	72.1 - 72.8	72.9 - 73.6	73.7 - 74.4	74.5 - 75.2	75.3 - 76.0	
11.81 - 12.20									1		1							2
12.21 - 12.59				1		2	3	2										8
12.60 - 12.98		1		1		7	2	4	3	2	1	2	1					24
12.99 - 13.38	1		1	2	3	9	10	9	9	6	2	5	1	3		1		62
13.39 - 13.77		1	1	4	8	7	4	9	12	12	8	6	2	3	1			78
13.78 - 14.16				2	3	6	7	13	18	7	9	5	6		1	2		79
14.17 - 14.56			1	3	4	12	8	12	13	10	9	3	8	2	2	1		88
14.57 - 14.95		1		2		2	9	8	6	8	10	8	8	3			1	66
14.96 - 15.34					2	1	3	4	4	6	3	7	4	1	2	2		39
15.35 - 15.74				1		1	2	2	3	9	4	3	4	1	2	2		34
15.75 - 16.13								1	3	2		3	2	1				12
16.14 - 16.53									1		1	1			2	1		6
16.54 - 16.92													1					1
16.93 - 17.31										1								1
	1	3	3	16	20	47	48	64	73	63	46	43	37	14	10	9	1	500

Measurements are in Inches

Stature (x) Mean: 69.497 S.D.: 2.251
Seat Width, Sitting (y) Mean: 14.187 S.D.: .872

r= .322
x= .831y+57.708
y= .125x+ 5.500

Stature

Shoulder Breadth	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	67.4 - 68.1	[illegible]	[illegible]	69.7 - 70.4	70.5 - 71.2	71.3 - 72.0	72.1 - 72.8	72.9 - 73.6	73.7 - 74.4	74.5 - 75.2	[illegible]	
[illegible]										1	1							1
15.8 - 16.5				2		2	2	1	1	1		1		1				11
16.6 - 17.[illegible]		3		2	3	5	6	13	6	3		2	2	1				46
17.3 - 18.0	1		2	5	8	21	21	24	30	15	9	14	6	5	2	1		164
18.1 - 18.8			1	4	6	12	13	21	24	25	22	17	11	5	2	5		168
18.9 - 19.6				1	3	6	5	4	9	12	10	4	13	1	5	2		75
19.7 - 20.4				2		1	1	1	3	6	5	4	3	1	1	1	1	30
20.5 - 21.2										1	1		1					3
21.3 - 22.0												1	1					2
	1	3	3	16	20	47	48	64	73	63	48	43	37	14	10	9	1	500

Measurements are in Inches

Stature (x)
Shoulder Breadth (y)

Mean: 69.497 S.D.: 2.251
Mean: 18.268 S.D.: .875

r= .250
x= .740y + 55.869
y= .113x + 10.415

Shoulder Circumference

	Stature																
	61.7 - 62.4	63.5 - 64.2	64.3 - 65.0	65.0 - 65.7	65.8 - 66.5	66.6 - 67.3	67.4 - 68.1	68.1 - 68.8	68.9 - 69.6	69.7 - 70.4	70.5 - 71.2	71.3 - 72.0	72.1 - 72.8	72.9 - 73.6	73.7 - 74.4	74.5 - 75.2	75.3 - 76.0	
39.4 - 40.1				2		2		2			1	1						8
40.2 - 40.9				1		1	1			1								4
41.0 - 41.7		1				1	3	1	2			1	1	1				11
41.8 - 42.5		1				4	3	4	3	1		1						17
42.5 - 43.2					4	8	2	4	6	2	4	4	1			1		36
43.3 - 44.0		1	1	4	5	7	7	13	12	11	6	6	5	4	1	1		84
44.1 - 44.8	1		1	2	1	7	7	11	6	4	5	7	4	1	1			58
44.9 - 45.6			1	1	2	2	6	11	14	6	4	3	5			2		57
45.7 - 46.4				1	3	8	5	5	10	10	6	8	5	2		2		66
46.5 - 47.2				1	2	2	6	6	10	9	6	4	1	3	2	1		53
47.3 - 48.0					1	2	2	3	3	10	4	4	3	2	2			36
48.1 - 48.8				2	2	2	5	2	5	5	5	3	6		3	1		41
48.8 - 49.5				1		1		2	1	3	3		2	1	1	1		16
49.6 - 50.3							1		1	1	2		1					6
50.4 - 51.1				1									1				1	3
51.2 - 51.9											1		1					2
52.0 - 52.7											1							1
52.8 - 53.5												1						1
	1	3	3	16	20	47	48	64	73	63	48	43	37	14	10	9	1	500

Measurements are in Inches

Stature (x) Mean: 69.497 S.D.: 2.251
Shoulder Circumference (y) Mean: 45.408 S.D.: 2.235

r=.255
x=.256y + 57.873
y=.253x + 27.825

Stature

[illegible] bow Length	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	67.4 - 6[illegible].1	68.1 - 68.8	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	7[illegible].7 - 74.4	74.5 - 75.[illegible]	75.[illegible] - 76.[illegible]	
1[illegible].21 - 12.59	1																	1
12.60 - 12.98		1																1
12.99 - 13.38		1		1														2
13.39 - 13.77				2	3	2	2	1		1			2					13
13.78 - 14.16			3	3	6	11	8	7	3			1			1			43
14.17 - 14.56		1		6	7	14	11	11	11	14	3	1		2				81
14.57 - 14.95				2	3	14	14	19	17	11	13	4		1				98
14.96 - 15.34				1		4	10	18	23	15	15	10	10	2		1		109
15.35 - 15.74					1	2	3	3	15	15	12	13	12	4	1			81
15.75 - 16.13				1				3	3	6	4	8	11	4	5	4		49
[illegible].14 - 16.53								2	1	1	1	5	2	1	2	2		17
16.54 - 16.92												1			1	1		3
16.93 - 17.31																1	1	2
	1	3	3	16	20	47	48	64	73	63	48	43	37	14	10	9	1	500

Measurements are in Inches

Stature (x) Mean: 69.497 S.D.: 2.251

Shoulder-Elbow Length (y) Mean: 14.991 S.D.: .702

r= .639

x= 2.049y + 38.780

y= .199x + 1.161

Stature

Sitting Height	62.7 - 63.4	63.5 - 64.2	64.3 - 65.0	65.0 - 65.7	65.8 - 66.5	66.6 - 67.3	67.4 - 68.1	68.2 - 68.9	69.0 - 69.6	69.7 - 70.4	70.5 - 71.2	71.3 - 72.0	72.1 - 72.8	72.9 - 73.6	73.7 - 74.4	74.5 - 75.2	75.3 - 76.0	
31.5 - 32.2									1	1				1				3
32.3 - 33.0				1	1	3	1	1						1				8
33.1 - 33.8		1	1	5	7	5	3	1				2	1					26
33.9 - 34.6		2	1	7	8	20	9	9	10	4			1	1				72
34.7 - 35.4	1		1	1	3	14	21	25	19	9	10	7	1	1	1			114
35.5 - 36.2				1	1	4	11	24	21	30	14	9	6	1	2	2		126
36.3 - 37.0							3	3	16	13	14	10	14	4	1	3		81
37.0 - 37.7				1		1		1	6	6	7	11	6	4	3	1	1	48
37.8 - 38.5											3	3	7	1	1	1		16
38.6 - 39.3												1			2	2		5
39.4 - 40.1													1					1
	1	3	3	16	20	47	48	64	73	63	48	43	37	14	10	9	1	500

Measurements are in inches

Stature (x) Mean: 69.497 S.D.: 2.251
Sitting Height (y) Mean: 35.608 S.D.: 1.271

r = .615
x = 1.089y + 30.720
y = .347x + 11.493

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Sleeve Length

Sleeve Length	Stature 62.7 - 63.4	63.5 - 64.2	64.3 - 65.0	65.0 - 65.7	65.8 - 66.5	66.6 - 67.3	67.4 - 68.1	68.2 - 68.8	68.9 - 69.6	69.7 - 70.4	70.5 - 71.2	71.3 - 72.0	72.1 - 72.8	72.9 - 73.6	73.7 - 74.4	74.5 - 75.2	75.3 - 76.0	
24.4 - 25.1									1				1					2
25.2 - 25.9							1						1					2
26.0 - 26.7				1		1						1						3
26.8 - 27.5	1					1												2
27.6 - 28.3		1		1									1					3
28.4 - 29.1		1	1	3	4	5	3	4	2					1				24
29.2 - 29.9		1	1	4	6	10	13	8	5	1	1			1				51
30.0 - 30.7			1	2	7	17	13	18	10	11	6	2	2	1	1			91
30.7 - 31.4				4	2	6	11	18	24	20	10	3	4			1		103
31.5 - 32.2					1	3	3	13	18	18	17	13	7	5	1	1		100
32.3 - 33.0						3	2	1	6	7	6	13	7	4	3	3		55
33.1 - 33.8				1		1	1	1	3	4	6	4	8	1	1	3		34
33.9 - 34.6								1	2	1		1	4		2			11
34.7 - 35.4												4	1	1		1		7
35.5 - 36.3							1		1	1	1	2			1		1	8
36.3 - 37.0									1		1				1			3
37.0 - 37.7													1					1
	1	3	3	16	20	47	48	64	73	63	48	43	37	14	10	9	1	500

Measurements are in Inches

Stature (x) Mean: 69.497 S.D.: 2.251
Sleeve Length (y) Mean: 31.320 S.D.: 1.689

r= .526
x= .701y + 47.542
y= .395x + 3.869

Stature

Waist Circumference	62.7 - 63.4	63.5 - 64.2	64.3 - 65.0	65.0 - 65.7	65.8 - 66.5	66.6 - 67.3	67.4 - 68.1	68.1 - 68.8	68.9 - 69.6	69.7 - 70.4	70.5 - 71.2	71.3 - 72.0	72.1 - 72.8	72.9 - 73.6	73.7 - 74.4	74.5 - 75.2	75.3 - 76.0	
26.0 - 26.7						1			1	1								3
26.8 - 27.5							2	1	1									4
27.6 - 28.3		1		3	1		3	1	1	1		2						13
28.4 - 29.1						2		4	4	2	3	3		1				19
29.2 - 29.9			1			7	1	7	2	1	1	2				1		23
30.0 - 30.7	1			1	3	7	6	4	13	6		4	4	2		1		52
30.7 - 31.4				1	1	7	7	10	7	4	2	4	4	1	2	1		58
31.5 - 32.2		1		2	6	6	6	12	3	6	5	5		1				53
32.3 - 33.0			1		1	5	3	4	11	7	3	4	6		1	1		47
33.1 - 33.8		1		2	1	1	6	9	12	12	6	5	3	2	1	1		62
33.9 - 34.6			1	1	3	4	6	3	9	6	8	7	3	5	1	1	1	59
34.7 - 35.4				3	1	5	2	3	3	6	2	3	3	1	2	1		35
35.5 - 36.2				1	2	1	2	1	3	4	3	2	6	1	3			29
36.3 - 37.0					1		1	2	2	3	6		3			1		19
37.0 - 37.7				2			2	3	1	1		2	4			1		16
37.8 - 38.5							1			1	1							3
38.6 - 39.3						1				1	1							3
39.4 - 40.1										1			1					2
	1	3	3	16	20	47	48	64	73	63	48	43	37	14	10	9	1	500

Measurements are in Inches

Stature (x) Mean: 69.497 S.D.:2.251
Waist Circumference (y) Mean: 32.696 S.D.:2.489

$r = .196$
$x = .177y + 63.710$
$y = .217x + 17.615$

Stature

Waist Height (Outseam)	62.7 - 63.4	63.5 - 64.2	64.3 - 65.0	65.0 - 65.7	65.8 - 66.5	66.6 - 67.3	67.4 - 68.1	68.1 - 68.8	68.9 - 69.6	69.7 - 70.4	70.5 - 71.2	71.3 - 72.0	72.1 - 72.8	72.9 - 73.6	73.7 - 74.4	74.5 - 75.2	75.3 - 76.0	
36.3 - 37.0					1		1											2
37.0 - 37.7	1	2			2	1						1	1					8
37.8 - 38.5			1	3	1	2							1					8
38.6 - 39.3				6	7	8	1	2						1				25
39.4 - 40.1		1	2	4	6	8	15	10	6	1	3			2	1			59
40.2 - 40.9				2	3	17	16	14	11	4	2	1	1					71
41.0 - 41.7						8	10	18	19	15	9	3		1				83
41.8 - 42.5				1		1	5	18	24	19	17	9	3					97
42.5 - 43.2						1		2	11	21	9	7	10		2			63
43.3 - 44.0						1			2	2	7	10	10	4		1		37
44.1 - 44.8										1	1	8	6	4	2	2		24
44.9 - 45.6												4	5	1	4	2		16
45.7 - 46.4														1	1	1		3
46.5 - 47.2																2	1	3
47.3 - 48.0																1		1
	1	3	3	16	20	47	48	64	73	63	48	43	37	14	10	9	1	500

Measurements are in Inches

Stature (x) Mean: 69.497 S.D.: 2.251
Waist Height (y) Mean: 41.655 S.D.: 1.792

r= .752
x= .945y + 30.133
y= .599x + .026

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Weight

Weight \ Stature	62.7 - 63.4	63.5 - 64.2	64.3 - 65.0	65.0 - 65.7	65.8 - 66.5	66.6 - 67.3	67.4 - 68.1	68.1 - 68.8	68.9 - 69.6	69.7 - 70.4	70.5 - 71.2	71.3 - 72.0	72.1 - 72.8	72.9 - 73.6	73.7 - 74.4	74.5 - 75.2	75.3 - 76.0	
110 - 119				1														1
120 - 129		1		1		2	2	1	2	1				1				11
130 - 139			1	2	1	5	3	4	3	1		1		1				22
140 - 149	1	1		1	5	13	8	14	9	5	2	4	2	1				66
150 - 159		1	1	4	4	12	9	12	12	6	5	7	3	2	1			79
160 - 169			1	4	4	10	13	15	19	17	9	8	5	1	1	3		110
170 - 179				2	5	3	8	11	16	12	12	6	9	1	1	2		88
180 - 189					1	2	4	4	7	12	9	10	6	5	1			61
190 - 199				1			1	3	4	4	8	6	4		3	3	1	38
200 - 209									1	4	2		5	2	3	1		18
210 - 219										1	1		2					4
220 - 229												1	1					2
	1	3	3	16	20	47	48	64	73	63	48	43	37	14	10	9	1	500

Stature

Stature is in Inches
Weight is in Pounds

Stature (x)
Weight (y)

Mean: 69.497
Mean:165.772

S.D.: 2.251
S.D.:18.899

r= .455
x= .054y + 60.515
y= 3.820x - 99.707

Crotch Height (inseam) × Waist Circumference

Crotch Height (inseam)	26.0 - 26.7	26.8 - 27.5	27.6 - 28.3	28.4 - 29.1	29.2 - 29.9	30.0 - 30.7	30.7 - 31.4	31.5 - 32.2	32.3 - 33.0	33.1 - 33.8	33.9 - 34.6	34.7 - 35.4	35.5 - 36.2	36.3 - 37.0	37.0 - 37.7	37.8 - 38.5	38.6 - 39.3	39.4 - 40.1	
26.0 - 26.7						1													1
26.8 - 27.5			1										1						2
27.6 - 28.3			1					1	1	1	1	1							6
28.4 - 29.1				1	2	1	1	4	3	1	2	6			1	1	1		21
29.2 - 29.9			1		1	3	2	6	6	4	6	3	2	1	5				35
30.0 - 30.7			2	2	2	10	9	11	5	9	9	3	3	2	1			1	69
30.7 - 31.4	1	2		1	6	11	14	11	13	13	8	9	4	2	5	2			102
31.5 - 32.2		1	4	4	4	7	7	5	4	17	12	5	4	6	3		2		85
32.3 - 33.0	2		2	6	2	8	13	9	5	8	9	2	8	5	2				83
33.1 - 33.8		1	1	1	2	7	6	6	6	6	5	3	5	1	2			1	53
33.9 - 34.6			1		1	1	3		5	2	3	2	1						19
34.7 - 35.4				1	1	1	2		1	1	2	3	1	1					14
35.5 - 36.2				1		2	1		1		1	1		1	1				9
36.3 - 37.0											1								1
	3	4	13	19	23	52	58	53	47	62	59	35	29	19	16	3	3	2	506

Measurements are in Inches

Waist Circumference (x) Mean: 32.696 S.D.: 2.489
Crotch Height (y) Mean: 31.689 S.D.: 1.643

r = - .006
x = - .009y + 32.981
y = - .004x + 31.820

Waist Circumference

Seat Circumference	26.0 - 26.7	26.8 - 27.5	27.6 - 28.3	28.4 - 29.1	29.2 - 29.9	30.0 - 30.7	30.7 - 31.4	31.5 - 32.2	32.3 - 33.0	33.1 - 33.8	33.9 - 34.6	34.7 - 35.4	35.5 - 36.2	36.3 - 37.0	37.0 - 37.7	37.8 - 38.5	38.6 - 39.3	39.4 - 40.1	
31.5 - 32.2							1												1
32.3 - 33.0								1											1
33.1 - 33.8	1	1	3	3					1	1									10
33.9 - 34.6	1	2	2		1	1					1								7
34.7 - 35.4		1	3	5	2	8	2												22
35.5 - 36.2	1		4	5	11	12	10	6		1									50
36.3 - 37.0			1	4	4	10	11	6	3	1									40
37.0 - 37.7					3	15	15	22	16	4	4	1	1		1				82
37.8 - 38.5				2	1	4	11	8	12	14	12	3	2		1				70
38.6 - 39.3					1	2	6	5	10	21	17	10	4	4	4				83
39.4 - 40.1								5	2	11	12	12	3	4	4		1		60
40.2 - 40.9									3	6	9	5	5	3	1		1		33
41.0 - 41.7											3	3	5	6	3	1		1	22
41.8 - 42.5										1				1	2			1	5
42.5 - 43.2										1	1		1		1	2			6
43.? - 44.0										1			2		2				5
44.1 - 44.8												1					1		2
44.9 - 45.6														1					1
	3	4	13	19	23	52	58	53	47	62	59	35	29	19	16	3	3	2	500

Measurements are in Inches

Waist Circumference (x) Mean: 32.696 S.D.: 2.489
Seat Circumference (y) Mean: 38.179 S.D.: 2.056

r= .781
x= .946y - 3.421
y= .645x + 17.090

Waist Height (Outseam) \ Waist Circumference	26.0 - 26.7	26.8 - 27.5	27.6 - 28.3	28.4 - 29.1	29.2 - 29.9	30.0 - 30.7	30.7 - 31.4	31.5 - 32.2	32.3 - 33.0	33.1 - 33.8	33.9 - 34.6	34.7 - 35.4	35.5 - 36.2	36.3 - 37.0	37.0 - 37.7	37.8 - 38.5	38.6 - 39.3	39.4 - 40.1	
36.3 - 37.0						1		1											2
37.0 - 37.7			1			2		2		1	1		1						8
37.8 - 38.5			1		2	1	1	1	1	1									8
38.6 - 39.3	1		3		1	2	2	7	3	1	1	3	1						25
39.4 - 40.1			1	3	2	4	9	12	7	6	9	1	1	1	3				59
40.2 - 40.9		2	1	3	3	8	6	5	7	9	10	7	3	2	1	1	1		71
41.0 - 41.7		1	1	3	7	12	11	5	6	6	9	7	4	3	2	1	2	1	83
41.8 - 42.5	1	1	4	3	3	9	11	12	9	15	12	3	6	4	3	1			97
42.5 - 43.2	1			3	2	5	7	5	5	10	5	6	5	5	4				63
43.3 - 44.0				3	2	3	2	3	2	4	6	5	3	2	2				37
44.1 - 44.8			1	1		3	3		4	5	3	1	3						24
44.9 - 45.6					1	2	2		2	1	2	1	2	1	1			1	16
45.7 - 46.4							2			1									3
46.5 - 47.2									1		1			1					3
47.3 - 48.0												1							1
	3	4	13	19	23	52	58	53	47	62	59	35	29	19	16	3	3	2	500

Measurements are in Inches

Waist Circumference (x)
Waist Height (y)

Mean: 32.696 S.D.: 2.489
Mean: 41.655 S.D.: 1.792

r= .160
x= .222y + 23.449
y= .115x + 37.895

Waist Circumference

Weight	[illegible] - 26.7	26.8 - 27.5	27.6 - 28.3	28.4 - 29.1	29.2 - 29.9	30.0 - 30.7	30.7 - 31.4	31.5 - 32.2	32.3 - 33.0	33.1 - 33.8	33.9 - 34.6	34.7 - 35.4	35.5 - 36.2	36.3 - 37.0	37.0 - 37.7	37.8 - 38.5	38.6 - 39.3	39.4 - 40.1	
110 - 119			1																1
120 - 129	3	2	2	3		1													11
130 - 139		2	5	3	5	3	2	1			1								22
140 - 149			4	8	9	24	12	8			1								56
150 - 159				5	4	14	18	1[illegible]	8	5	4	1			1				79
160 - 169			1		5	8	18	19	24	16	9	6	2						110
170 - 179						2	7	5	13	24	19	7	9	1	1				88
180 - 189							1	11	2	11	16	12	6	8	3		1		61
190 - 199										5	8	5	7	7	5	1			38
200 - 209										1	1	2	5	2	4	2	1		18
210 - 219														1			1	2	4
220 - 229															2				2
	3	4	13	19	23	52	58	53	47	62	59	35	29	19	16	3	3	2	500

Waist Circumference is in Inches
Weight is in Pounds

Waist Circumference (x)	**Mean: 32.696**	**S.D.: 2.489**	**r= .824**
Weight (y)	**Mean: 165.772**	**S.D.: 18.899**	**x= .109y + 14.627**
			y= 6.257x - 38.807

Waist Height (Outseam)	Waist Circumference																	
	26.0 - 26.7	26.8 - 27.5	27.6 - 28.3	28.4 - 29.1	29.2 - 29.9	30.0 - 30.7	30.7 - 31.4	31.5 - 32.2	32.3 - 33.0	33.1 - 33.8	33.9 - 34.6	34.7 - 35.4	35.5 - 36.2	36.3 - 37.0	37.0 - 37.7	37.8 - 38.5	38.6 - 39.3	39.4 - 40.1	
36.3 - 37.0						1		1											2
37.0 - 37.7			1			2		2		1	1		1						8
37.8 - 38.5			1		2	1	1	1	1	1									8
38.6 - 39.3	1		3		1	2	2	7	3	1	1	3	1						25
39.4 - 40.1			1	3	2	4	9	12	7	6	9	1	1	1	3				59
40.2 - 40.9		2	1	3	3	8	8	5	7	9	10	7	3	2	1	1	1		71
41.0 - 41.7		1	1	3	7	12	11	5	6	8	9	7	4	3	2	1	2	1	83
41.8 - 42.5	1	1	4	3	3	9	11	12	9	15	12	3	6	4	3	1			97
42.5 - 43.2	1			3	2	5	7	5	5	10	5	6	5	5	4				63
43.3 - 44.0				3	2	3	2	3	2	4	6	5	3	2	2				37
44.1 - 44.8			1	1		3	3		4	5	3	1	3						24
44.9 - 45.6					1	2	2		2	1	2	1	2	1	1			1	16
45.7 - 46.4							2			1									3
46.5 - 47.2									1		1			1					3
47.3 - 48.0												1							1
	3	4	13	19	23	52	58	53	47	62	59	35	29	19	16	3	3	2	500

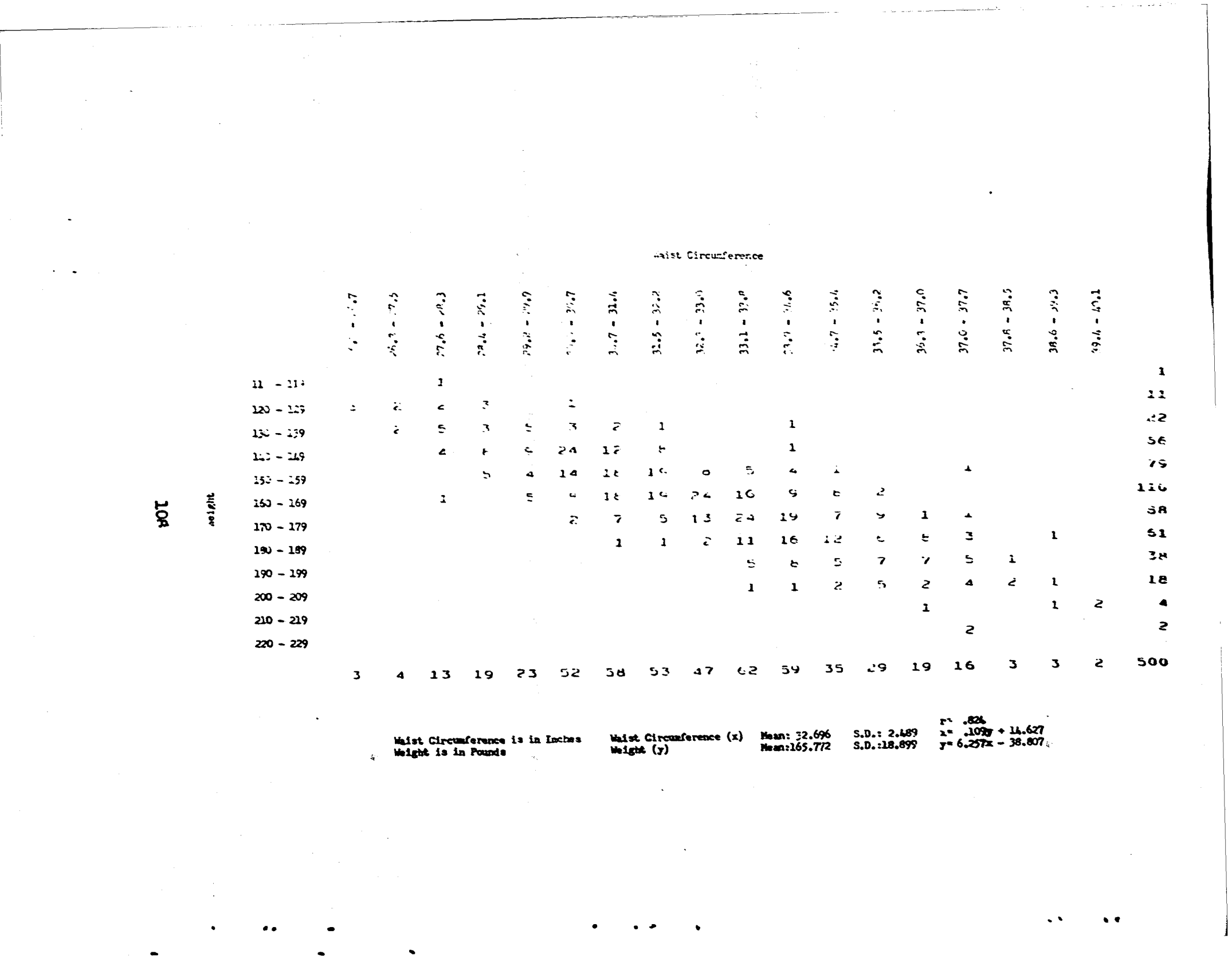
Measurements are in Inches

Waist Circumference (x) — Mean: 32.696 — S.D.: 2.489
Waist Height (y) — Mean: 41.655 — S.D.: 1.792

$r = .160$

$x = .222y + 23.449$

$y = .115x + 37.895$


Waist Circumference
Weight
11 - 119
120 - 129
130 - 139
140 - 149
150 - 159
160 - 169
170 - 179
180 - 189
190 - 199
200 - 209
210 - 219
220 - 229
3 4 13 19 23 52 58 53 47 62 59 35 29 19 16 3 3 2 500
Waist Circumference is in Inches
Weight is in Pounds
Waist Circumference (x) Mean: 32.696 S.D.: 2.489
Weight (y) Mean:165.772 S.D.:18.899
r² = .826
x= .109y + 14.627
y= 6.257x - 38.807

Weight

Percent Body Fat	110 - 119	120 - 129	130 - 139	140 - 149	150 - 159	160 - 169	170 - 179	180 - 189	190 - 199	200 - 209	210 - 219	220 - 229	
5.0 - 7.9		4	6		1								11
8.0 - 8.9		3	7	15	7	7	2						41
9.0 - 9.9	1	3	6	11	13	6	1						41
10.0 - 10.9			1	12	12	11	3		1				40
11.0 - 11.9			2	6	6	8	10	1	3				36
12.0 - 12.9				7	7	10	5	3	2	1			35
13.0 - 13.9		1		4	9	9	10	7	1	1			42
14.0 - 14.9			1	4	6	15	10	6	6				49
15.0 - 15.9				2	6	11	13	4	3				39
16.0 - 16.9				3	5	13	5	12	7	4	1		54
17.0 - 17.9				1	4	5	6	12	5	3			36
18.0 - 18.9					1	10	5	6	6	1	2	1	33
19.0 - 19.9						1	3	5	2	2			13
20.0 - 20.9				1			3	3	1	3			11
21.0 - 21.9							2		1	1			4
22.0 - 22.9						2				1	1	1	5
23.0 - 23.9									1				1
24.0 - 24.9													
25.0 - 25.9										1			1
	1	11	22	66	79	110	88	51	38	18	4	2	500

Weight is in Pounds
Body Fat is in Percent

Weight (x)
Percent Body Fat (y)

Mean: 165.772 S.D.: 18.899
Mean: 13.338 S.D.: 3.636

r = .622
x = 3.230y + 122.690
y = .120x - 6.555

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